

# Monthly Labor Review

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SEPTEMBER 1960 VOL. 83 NO.

9

**Manpower Problems and Prospects in Latin America**

**Wage Developments in Manufacturing, 1959**

**Two Articles on Office Automation**

**UNITED STATES DEPARTMENT OF LABOR**

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# Monthly Labor Review

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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LAWRENCE R. KLEIN, *Editor-in-Chief (on leave)*

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# Occupational Wage Surveys

(BLS Bulletins 1265-31 through 1265-61)

The U.S. Department of Labor's Bureau of Labor Statistics has released all of the occupational wage surveys for major labor markets conducted in late 1959 and early 1960. (For a listing of Bulletins 1265-1 through 1265-30, see the July 1960 issue of the Monthly Labor Review, page II.) The individual bulletins provide earnings information on about 60 jobs selected from several categories: Office clerical, professional and technical, maintenance and powerplant, and custodial and material movement.

In addition to areawide averages and distributions of workers by earnings classes for each job, information is provided wherever possible by major industry division, including manufacturing, public utilities, finance, trade, and services.

Also presented for all areas except Baltimore, Buffalo, Cleveland, Dallas, Detroit, and Seattle are data for paid holidays; paid vacations; scheduled weekly hours; health, insurance, and pension plans; minimum entrance rates for women office workers; and shift differential practices.

<i>Area covered</i>	<i>Survey date</i>	<i>Bull. No.</i>	<i>Price (cents)</i>
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Albany-Schenectady-Troy.....	March 1960.....	1265-40	25
Albuquerque.....	May 1960.....	1265-54	25
Allentown-Bethlehem-Easton.....	March 1960.....	1265-33	25
Atlanta.....	June 1960.....	1265-60	25
Beaumont-Port Arthur.....	May 1960.....	1265-58	25
Birmingham.....	March 1960.....	1265-37	25
Boise.....	June 1960.....	1265-61	20
Charleston, W. Va.....	April 1960.....	1265-48	25
Charlotte.....	April 1960.....	1265-39	20
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New York.....	April 1960.....	1265-44	25
Paterson-Clifton-Passaic.....	May 1960.....	1265-50	25
Phoenix.....	April 1960.....	1265-42	25
Portland, Oreg.....	May 1960.....	1265-49	25
Providence.....	March 1960.....	1265-34	25
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# The Labor Month in Review

NEGOTIATIONS over wages or work rules occupied most of the railroad industry throughout August and early September. The major nonoperating unions settled their wage dispute with the major railroads on August 19, maintenance employees of the Pennsylvania Railroad ended a 12-day strike on September 12, members of the Switchmen's Union were threatening to walk out on the western carriers, and the class I railroads were entering national negotiations with the operating unions over work-rule changes that had been proposed by the companies 3 years ago.

Shortly before September 7, when work-rule negotiations were to begin, the operating unions made a counterproposal which included a demand that they be given a voice in determining the size, qualifications, and training of train crews. Secretary of Labor James P. Mitchell called management and unions involved in the work-rule dispute to meet with him on September 7. The Secretary, renewing the suggestion that the issues be turned over to a commission that would function outside the Railway Labor Act, brought the parties to an agreement to name a committee of six from each side to meet on September 14 to make a final decision on his proposal.

The Transport Workers Union and System Federation 152, representing members of the Machinists, the Sheet Metal Workers, and the Boilermakers, struck the Pennsylvania Railroad on September 1, closing down the road for the first time in its 114 years. A settlement covering the 15,000 employees represented by TWU and the 5,000 by the Federation was reached on September 12. Some 52,000 other employees had been furloughed by the carrier during the strike. Among the 27 points at issue were the TWU demands for definition of job classifications and an end to the assignment of the same man to different kinds of jobs as well as for a ban on contracts with outside concerns for maintenance and construction work. The union claimed a victory, but a spokesman for the Pennsylvania said that the settlement terms were so complicated, they

would not release the details until they could be put into language the public could understand.

Eleven nonoperating rail unions and the major railroads settled their 15-month wage dispute by signing an agreement providing for a 5-cent-an-hour wage increase, retroactive to July 1, 1960. It also incorporated the 17 cents an hour cost-of-living increase into basic pay rates and discontinued escalation. Improvements in fringe benefits included company-paid life insurance of \$4,000 for each employee; equalization of hospital, medical, and surgical benefits for dependents with those of active employees and a 3-month extension of such benefits to furloughed workers; and liberalization of rules covering vacation and holiday pay.

The Switchmen's Union, which originally accepted the 4-percent pattern, then rejected it and scheduled a strike against 17 western railroads, agreed upon a postponement at the request of the National Mediation Board.

Early in September, the Brotherhood of Railroad Trainmen sued the Nation's railroads for more than \$10 million in damages on charges that they had "conspired to finance the recent Long Island Rail Road strike." Challenging the legality of the railroad's strike insurance plan on grounds of violation of the Interstate Commerce Act and the Federal Anti-Trust laws, the union contended that the "financial inducement" of the insurance made it more profitable for the line to shut down than to run.

Meanwhile, the New Haven Railroad asked its unionized workers, along with other employees, to defer 10 percent of their wages for the next 6 months. This would amount to about \$150,000 a week. New Haven President George Alpert said that the Pennsylvania strike threatened his own road with bankruptcy, owing to loss of freight shipments. The New Haven's share of strike-insurance benefits during the Pennsylvania walkout was over \$100,000 a week. The Brotherhood of Railroad Trainmen were expected to reject the plea.

IN MID-AUGUST, the Boeing Airplane Co. and the Machinists agreed upon a 2-year contract covering about 40,000 workers which differs from those reached earlier with other major West Coast aircraft producers in that it provided for an immedi-

ate wage increase ranging from 5.5 to 9.5 cents an hour, as well as an additional 4.5 to 8.0 cents in August 1961. It also set up a fund in which employees accumulate credits for severance pay (a new benefit, based on hours worked and length of service), vacations, and sick leave. The first 40 hours credited to an employee each year are to be assigned to an account which can accumulate up to 200 hours and which can be drawn upon for sick leave or severance pay. The balance of each year's credits are for vacations.

On September 4, United Auto Worker members at United Aircraft's Sikorsky Division voted 1,067 to 329 to end their 3-month strike without having obtained a new contract. A general wage increase was not an issue. The company rejected the union's demands for a union shop, automatic wage progression, and unrestricted grievance arbitration; a decertification petition signed by 1,700 nonstrikers was pending at the National Labor Relations Board.

POLITICAL AND LEGISLATIVE QUESTIONS dominated the meeting of the AFL-CIO Executive Council in Chicago during the week of August 15, as well as that of the General Board in Washington in late August. The Executive Council called for the adoption of legislation it had supported in the 86th Congress and the General Board voted to endorse the Democratic presidential and vice-presidential candidates, as recommended by the Executive Council. The only dissenting vote was that of A. Philip Randolph, president of the Sleeping Car Porters.

The Executive Council set up a department to advise unions how to invest pension and welfare funds in housing projects and asked affiliated unions to contribute 5 cents a member for a get-out-the-vote campaign, but delayed action upon the International Longshoremen's Association's defiance of the Council's earlier order to cease activities in the Dominican Republic.

THE KOHLER Co. was found guilty on August 26 of prolonging by unfair labor practices the UAW strike at its plant in Kohler, Wis., which had begun April 5, 1954. The National Labor Relations Board, climaxing one of the longest cases in the Board's history, ordered Kohler to reinstate strikers who had not been permanently replaced prior to June 1, 1954, and to pay any eligible

striker for any loss of wages resulting from delay in reinstatement beginning 5 days from application for reinstatement to the date of the company's offer of reemployment. The company announced it would appeal and said there would be no change in the status quo until a final court decision had been reached. The UAW said it would appeal that part of the order which upheld the discharge of some 80 workers who had been found guilty of unlawful picketing or other illegal acts.

Federal District Court Judge Ralph M. Freeman ordered the Crescent Brass and Pin Co. of Detroit to respect its contract with the UAW, should the company move to Georgia as it had announced it planned to do. Under the court order, the firm's present employees must be offered jobs at the Georgia plant at the same rates of pay and under the same working conditions as stipulated in the contract clause on job transfers. Any new employees hired in Georgia are also to be covered by the contract. The company had offered its present employees jobs in the Georgia plant, but at rates prevailing in that locality.

Early in August, Federal Court Judge George B. Harris ruled that Sears, Roebuck & Co. must arbitrate job rights of 144 employees discharged after refusing to cross picket lines at organized Sears stores in San Francisco last May. Members of the Retail Clerks had ignored management orders to report to work through Machinists' picket lines during what Sears contended was a strike in violation of contract terms. Judge Harris stated that "grievances asserted in the complaints are . . . covered in the collective bargaining agreement and are arbitrable." He said that a company may replace employees, but that "it is equally clear that arbitrary and capricious conduct cannot be engaged in nor may the replacement thesis be used as a subterfuge."

The city council of Philadelphia in late August approved a partial union shop agreement with the State, County and Municipal Employees union. The agreement requires union membership as a condition of employment for some 12,000 city employees, makes membership voluntary for about 4,800 others, and excludes about 1,200 of the supervisory employees from the union's jurisdiction. It includes an annual 15-day period during which members may withdraw from the union.



# Manpower Problems and Prospects in Latin America

ESTANISLAU FISCHLOWITZ\*

LATIN AMERICAN COUNTRIES are increasingly aware that they can hardly achieve their targets of rapid and sustained economic development solely through the enlargement of their capital resources. They have come to realize that they cannot understate the importance of the contribution of the labor force. Moreover, in 1960, they observe disturbing aspects of the manpower situation which could seriously retard or interrupt the rate of economic growth, and this, in turn, could aggravate current dislocations in the political and social sphere.

Four elements of Latin American manpower resources are prerequisites for fast, large-scale economic progress:

1. The creation of a sufficient supply of semi-skilled and skilled workers and technically well-trained specialists to correct the imbalance in the composition of the labor force;
2. The full and economically productive use of the available labor force, with simultaneous elimination of pockets of unemployment in urban areas and reduction of high rates of underemployment which characterize the rural labor markets;
3. A considerable increase in the rather low average standards of labor productivity; and
4. An improvement in labor-management relations, which seem to have slightly deteriorated in recent years.

Let us then survey the Latin American republics with these points in mind and summarize what is

being done through national programs as well as within the framework of inter-American cooperation to improve the situation.<sup>1</sup>

## Shortage of Skilled Manpower

The main common denominator of all these countries is a considerable and still increasing surplus of unskilled manual manpower; at the same time, there exists a marked shortage of semi-skilled and skilled workers and technicians. The scarcity in the upper strata of the labor pyramid seriously hampers accelerated industrialization, especially because most of the new large-scale industries in Latin America have installed highly mechanized and even, in some instances, automated plant equipment. This unexpectedly early impact on Latin America of the contemporary technological revolution is being felt most sharply by industry in Brazil, Argentina, Mexico, Venezuela, and Colombia.

Ever-growing requirements for skilled manpower, which are particularly acute in the secondary and tertiary sectors of the economy, can be satisfied through immigration of qualified workers from other more industrially advanced countries, particularly western and southern European nations, and/or broadening and intensification of training programs for native workers.

For the following reasons, immigration cannot be expected to fill the demand for skilled manpower to any great extent: (1) the limited availability of European workers because of their ready absorption in the expanding economy of Europe, (2) the inadequacy in several Latin American countries of machinery that would facilitate immigration, and (3) the high per capita cost of migration.<sup>2</sup>

*Training Programs.* Large vocational training programs, including apprenticeship and training within industry projects, must therefore be given

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This article reflects the personal ideas of the author and does not involve any responsibility on the part of the Pan American Union.

<sup>1</sup> See Progress Report on the Manpower Survey in Latin America (New York, United Nations, Economic Commission for Latin America, July 20, 1955, Gen. E/CN.12/375) and further reports on the matter, particularly that submitted to the 1957 meeting of the ECLA in La Paz, Bolivia.

<sup>2</sup> This opinion is confirmed in a recent monograph, *Immigration to Latin America*, by Professor Fernando Bastos de Avila, to be published by the Pan American Union in 1960.

expanded emphasis. These programs must be designed for the adult worker as well as for the young entrant into the labor force. Simultaneously, there must be an expansion and improvement in the educational facilities available to the populace. However, it must be recognized that initially the urban population will probably benefit most from better educational opportunities.

Recent large-scale vocational training experiments, such as the impressive program of accelerated training of rural workers for the new motor car industry of Brazil, demonstrate that the Latin American worker, contrary to widespread misconceptions, can readily adapt to the demands of complex industrial operations.<sup>3</sup>

In the course of the last decade, several Latin American countries have embarked on very ambitious programs of worker training. Among achievements deserving special attention are: (1) the National Service of Industrial Apprenticeship (SENAI) created in Brazil on June 15, 1942, and a similar program for commercial employees (SENAC)—both based on compulsory contributions (1 percent of payroll) by the employers; (2) the adoption by Colombia (in Act 118 of June 21, 1957, which regulates the apprenticeship contract) of a training program (SENA) which almost exactly follows that of Brazil, except that it covers all fields of economic activity; (3) the training programs in Argentina, where the National Commission of Technical Education was recently constituted in an attempt to coordinate the two existing networks of vocational schools; (4) the Chilean Presidential decree which set up in 1959 a National Commission of Vocational Training; and (5) the Venezuelan National Institute of Educational Cooperation created by the Act of August 22, 1959. In addition, all five Central American republics and several other countries of South America have some type of training program, though generally not as broad as those mentioned.

Without underestimating the positive aspects of such programs, whose annual output of thousands of trainees certainly enlarges the skilled labor supply, one should not, however, dismiss their following common defects. Curriculums are usually geared to the economic needs of the past, sometimes to those of the present, but almost never to foreseeable requirements of the future. Moreover, the programs often are not coordinated

with the employment services. Consequently, losses occur when apprentices and trainees are placed on jobs that do not fully utilize the skills they have acquired. Furthermore, the extremely high average per capita cost of these training programs inhibits their expansion.

In addition, the existing programs, with perhaps the exception of those in Mexico and Panama, grant highest priority to training for commerce, give relatively less attention to industry, and place least emphasis on agriculture, though the needs seem to be in exactly the reverse order. The number of vocational schools in Latin America at all levels falls acutely short of the requirements of economic growth in this region, as evidenced by the fact that their total enrollment amounts to not more than 13 percent of the enrollment in federally aided vocational schools in the United States.<sup>4</sup>

Furthermore, many workers lack the incentive to attend vocational schools because the differential between the wages of skilled and unskilled workers is so small. The majority of workers in several countries are paid at the level of the legal minimum wage.

Finally, vocational training programs could hardly succeed without the basis of a broad, widely expanded system of general education at the primary, secondary, and university levels.

*Working Group on Manpower Policy.* International technical assistance projects give the highest priority to activities designed to improve such national programs, earmarking for this purpose considerably more resources and experts than for any other social purpose.

A working group—consisting of representatives of the International Labor Organization, the United Nations Educational, Scientific and Cul-

<sup>3</sup> See periodic reports of GEIA (Grupo Executivo da Industria Automobilistica), Rio de Janeiro, Brazil; and also the encouraging observations on the rural migrants to Rio de Janeiro who have become construction workers, in the report on an inquiry carried out by the Brazilian Social Service in Industry (SESI) in December 1958, which was published by that agency in Rio de Janeiro in 1960.

<sup>4</sup> SENAI, whose collaboration in technical assistance programs of the International Labor Office has made important contributions to the training of instructors, teachers, and foremen in several Latin American countries, has recently received from the Export-Import Bank substantial financial assistance to purchase necessary equipment. This seems to be the first loan to a social institution of this type that has been made by the Export-Import Bank—a sort of anticipated performance of the loan program for social purposes launched by the U.S. Government in August 1960.

<sup>5</sup> United States-Latin America Relations—United States Business and Labor in Latin America, a study of the University of Chicago Research Center in Economic Development and Cultural Change for the Subcommittee on American Republics Affairs of the Committee on Foreign Relations, U.S. Senate (86th Cong., 2d sess.), p. 67.

tural Organization, the Intergovernmental Committee for European Migration, the Organization of American States, and the Economic Commission for Latin America—met in Santiago on May 17–18, 1960, to integrate their manpower programs for Latin America, in accordance with Resolution 149, adopted at the eighth session of the Economic Commission for Latin America (Panama, 1959). This meeting afforded an excellent opportunity for drawing up a balance of their activities.<sup>6</sup>

The resolution had recommended the establishment of "a joint project": (1) "to make an estimate of the skilled labor required . . ." (2) "to make an estimate of the means available for training and of existing resources," and (3) "to collaborate with governments which request such cooperation in preparing measures for the readaptation and expansion of these resources." However, by the time of the meeting it seemed more appropriate to emphasize better coordination of all technical assistance programs carried out in this field by the participating agencies, in order to eliminate existing overlappings and duplications; on the other hand, it was considered premature to embark on overambitious joint endeavors.

The working group decided that among the urgent problems to be dealt with, "the training of technicians, of engineers, and of research workers" deserved the utmost attention.

They also agreed that the following methodological problems required first consideration: "(1) a classification of economic activities and occupations together with a re-reevaluation of basic types of skills and professions, with a view to their adaptation to programming needs; (2) a reexamination of the [recommended standards regarding scope, coverage, etc.] of censuses and basic industrial surveys from the aspects of manpower problems; and (3) a determination of input requirements in respect of skills by types of economic activity based on agreed methods of evaluation."<sup>7</sup>

<sup>6</sup> See United Nations ECLA report SMLA/D.7, 1960.

<sup>7</sup> This summary of activities of international and inter-American organizations does not encompass the technical assistance activities of the U.S. International Cooperation Administration in such fields as community development and education (including vocational training), which have been extremely broad and, as a rule, very efficient and which have also benefited Latin America.

<sup>8</sup> Some organizations improvised in this field in the recent past, particularly in Argentina, Uruguay, Brazil, Venezuela, Peru, and Chile, do not seem to deserve a more detailed analysis. For work in this field in Brazil during the last few years, see Estanislau Fischlowitz, *Manpower Problems in Brazil* (in *International Labor Review*, Geneva, April 1959, pp. 414–417).

*National Employment Services.* Effective vocational training on primary, secondary, and technical levels is inseparable not only from well-oriented professional guidance but also from satisfactory operation of an employment service which, while clearing labor demands and offers, can assist the integration of trained and retrained workers into the economy.

However, almost none of the Latin American republics has succeeded in creating a national employment service fully worthy of the name, although other labor laws are multiplying fast.<sup>8</sup> The scarce and deficient labor exchange services now existing, as a rule, benefit isolated areas and professions only. They far from satisfy the need for a regular clearinghouse of employment offers and demands on a large scale, with proper emphasis on both interregional and interprofessional exchange of workers.

In view of the underdevelopment of the employment services, casual methods are used almost exclusively in recruitment (e.g., newspaper advertisements of job vacancies, hiring at the factory gate or on the basis of recommendations and "tips" by workers already employed, and reliance on labor contractors). These practices create disturbing problems both for employers offering jobs and for workers looking for employment.

The absence or paucity of labor exchanges also impedes the absorption, by the economy of the immigration areas (particularly the urban areas), of the disturbingly increasing streams of migrants from other parts of the country—a quite chaotic trend of internal migrations.

### Unemployment and Underemployment

There are serious defects in the scope and methodology of employment and unemployment statistics in all Latin American countries. Moreover, there is an almost total lack of continuous information on the changing situation in labor markets. But the lack of a thermometer to measure precisely the "unemployment fever" does not prevent recognition of the high incidence of urban unemployment and rural underemployment. These phenomena may be assessed through other, more empirical methods of observation. In addition, it is necessary to emphasize that large numbers of workers in agriculture and some



POPULATION OF LATIN AMERICA,<sup>1</sup> BY AGE GROUPS, 1950

Country	Population (in thousands)	Percent of population—		
		Under age 20	Age 20-64	Age 65 and over
Argentina.....	17,188	40.2	55.7	4.0
Bolivia.....	5,020	52.4	43.2	4.3
Brazil.....	51,976	52.1	45.5	2.5
Chile.....	5,745	44.2	51.9	3.9
Colombia.....	11,260	53.9	43.0	3.1
Costa Rica.....	805	53.4	43.7	2.9
Ecuador.....	3,156	52.6	43.9	3.6
El Salvador.....	1,856	51.9	45.0	3.1
Guatemala.....	2,802	55.3	42.1	2.6
Honduras.....	1,428	50.7	45.2	4.1
Mexico.....	25,567	53.1	44.1	2.8
Nicaragua.....	1,057	53.9	43.2	2.9
Panama.....	798	51.6	45.1	3.3
Paraguay.....	1,397	53.8	42.5	3.7
Peru.....	8,294	54.9	41.9	3.1
Uruguay.....	2,424	55.5	59.3	5.3
Venezuela.....	4,975	52.0	45.3	2.7

<sup>1</sup> Excludes British Honduras, Cuba, and Puerto Rico.

<sup>2</sup> Excludes jungle inhabitants.

<sup>3</sup> Excludes tribal Indians.

SOURCE: The Population of South America, 1950-1980, United Nations, ST/SA, Series A, Population Studies, No. 21 (May 1955), Annex B, Section II; and The Population of Central America (including Mexico), 1950-1980, United Nations ST/SA, Series A, Population Studies, No. 16 (1954), Annex B, Section II.

nonagricultural sectors of the economy (services, petty trade, etc.) live at a bare subsistence level because of the unproductive character of their occupations or the irregular, intermittent nature of their work.

Three main factors are responsible for the significant worsening in the unemployment situation in recent years: (1) the impact of the strong growth of the population, and in particular, the increasing pressure of considerable contingents of young people who are looking for their first jobs; (2) the competition which faces the urban labor force from the immigrants from rural areas; and (3) the fact, already referred to, that new industries, contrary to all expectations, do not absorb existing manpower surpluses because of their extensive mechanization.

**Population Pressures.** It is well known that Latin America has the highest rate of population increase in the whole world (approximately 2.5 percent a year and in some countries, like Peru, even as high as 4 percent). According to reasonably accurate projections, the population of Spanish- and Portuguese-speaking America will reach 316,635,000 in 1980 and about 600,000,000 in the year 2000.

The high birth rates, connected with decreasing infant mortality as a consequence of the advances of modern medicine, contribute to a con-

siderable rejuvenation of the population. The "population crisis" of Latin America is therefore—in striking contrast to the "senility explosion" in Western Europe and North America (though life expectancy increases slowly but steadily also in the southern countries of the Americas)—the progressive juvenility of Latin peoples. Not less than 49.8 percent of the population of South America was below 20 years of age according to the latest censuses, whereas in Central America (including Mexico and Panama), 53.1 percent were below 20. (See accompanying table.) Everything leads us to believe that the census of the Americas in 1960 will show a still greater proportion of children and young persons.<sup>9</sup>

In terms of the manpower situation, this means that each year increasing numbers of people around 16 to 18 years of age are entering the labor market. Most labor laws set the minimum entrance age for employment at 16 to 18 years. However, since the maximum age limit for compulsory school attendance is lower and the enforcement of both these statutory limits is very uneven, many younger children are looking for work too.

It would be misleading to infer from the relatively low population density of Latin America—10 inhabitants per square kilometer, according to the latest censuses (apart from such overpopulated countries as Haiti and El Salvador)—the conclusion that there is no "demographic unemployment."

**The Rural Exodus.** The population of Southern, Central, and Caribbean America was distributed, according to the latest censuses, approximately 59 percent in the rural and 41 percent in the urban and suburban zone. The proportion of urban population ranged from 25.0 percent in Guatemala to 62.5 percent in Argentina; it was one-third or more in 13 countries. In contrast to the criterion used in the United States, the division into urban and rural areas is based in Latin America on a vast

<sup>9</sup> The population trends point to the need for an overall revision of social legislation in Latin America with (a) more emphasis on broad educational, medical, and social security (e.g., family allowances) measures for the benefit of lower age groups, and (b) removal of excessive protection for older groups (e.g., too low age limits for old-age pensions). These issues are dealt with in a report which will be submitted by the Pan American Union at the Inter-American Conference to be held at Quito in February 1961 (Social Security and Economic Development, Doc. No. 22, Topic 28 of the Agenda).



range of administrative, economic, populational, and even sociological criteria, whose application varies considerably among Latin American republics. The foregoing estimate follows closely the various methods applied by the several countries and has, therefore, from a scientific point of view, a rather relative value. For example, the percentage of urban population as defined by the country coincided with the percentage living in places of 2,000 or more in the case of Mexico, but was about 14 percentage points higher in the case of Honduras. The traditional picture of a rural Latin America is changing very fast in view of the spectacular size of the land flight, which, with time, assumes the character of the most important phenomenon of both geographic and social mobility.

The main reasons for this movement are very clear.<sup>10</sup> The rural exodus can be attributed—apart from local conditions, such as political unrest in Colombia and the cycles of drought in the northeastern part of Brazil<sup>11</sup>—first of all to the structure of land ownership (the prevalence of latifundia, or large landed estates, which, according to the “Goltz Law,” act as a powerful expulsion factor, and the strong incidence of minifundia without a sound peasant ownership).

Another important factor is the increasing gap between the conditions of life in towns and in the countryside, from the standpoint of health resources, social protection, labor welfare, and educational and cultural facilities.

The attractive possibilities which industry offers (more regular employment, higher wages, social

security, etc.) seem to exercise relatively less influence upon internal migration than the expulsion factors which powerfully act in the rural zones.

There are no accurate statistics on the size of the rural exodus, but one can assume that not less than a million people, and perhaps many more, migrate each year in Latin America from rural to urban areas and suburban agglomerations. The rural exodus, which is almost never guided by appropriate measures of manpower administration, means a permanent and very considerable influx of unskilled and uneducated workers with extremely low standards of living into the urban labor markets, with all the risks which their competition entails for the employed industrial labor force. Their absorption by industry is a long, difficult, and painstaking process. As a rule, they do not find immediate employment except in construction, certain manufacturing industries which still use “brazeros” on a large scale, and, as far as women are concerned, domestic service. The rural exodus is, therefore, to a certain extent, equivalent to a mere geographical transfer of rural underemployment to industrial unemployment. Rural immigrants live in appallingly poor conditions in slum quarters of a typically rural habitat (“favelas” and “mocambos” in Brazil, “barriadas” and “callampas” in Peru, etc.) which strongly contrast with the ultramodern metropolitan quarters of the large urban centers.<sup>12</sup>

*Mechanization of New Industries.* A majority of the Latin American countries—the exceptions are some of the most underdeveloped countries—have deliberately embarked in the postwar period upon a program of fostering rapid industrial expansion. Despite the problems which render industrialization difficult, risky, and even in some instances perhaps not entirely sound from the economic point of view, there has been serious progress in many Latin American countries. Key industries such as steel mills, foundries, metallurgical factories, oil refineries, heavy chemical plants, and the automotive industry, all of which were almost unknown some 15 years ago, have been developed.<sup>13</sup>

Nothing is more striking in the industrial situation of the more advanced countries like Brazil, Mexico, Venezuela, and Argentina than the marked contrast between the steady increases

<sup>10</sup> See the excellent documentation of the Seminar on Urbanization Problems in Latin America (Santiago, Chile, July 6-18, 1959) and, in particular, ECLA, United Nations, *Creation of Employment Opportunities in Relation to Labor Supply*, Gen. E/CN.12/Ur/La.19, May 30, 1959.

<sup>11</sup> Estanislau Fischlowitz, *Migrantes Nordestinas*, Serie “Vida Brasileira,” Rio de Janeiro, Ministerio da Educação e Cultura, 1960.

The northeastern part of Brazil comprises 8 States, accounting for 14 percent of the national territory, and has a population of 20 million.

<sup>12</sup> T. Lynn Smith, *Un análisis comparativo de la Migración Rural Urbana en Latinoamérica* (in *Estadística*, Journal of the Inter-American Statistical Institute, December 1958). See also the inquiry on favelas in Rio de Janeiro, *Aspectos Humanos da Favela Carioca*, Sociedade de Análises Gráficas e Mecanográficas Aplicadas aos Complexos Sociais, Supplement to *O Estado de São Paulo*, São Paulo, Brazil, April 13, 1960.

<sup>13</sup> See *Economic Survey of Latin America, 1959*, Report Submitted to the Economic and Social Council, Santiago, Chile, June 14, 1960 (United Nations, ECLA, E/CN.12/541). This report stresses that although the rate of growth in industrial output in Latin America decreased in 1958 and 1959, it rose substantially in Chile, Mexico, Venezuela, and Colombia. See also *Informe Anual del Secretario Ejecutivo del Consejo Interamericano Económico-Social*, Principales Acontecimientos y Tendencias Económico-Sociales de los Países Americanos en 1958 (EA/8 or H/VES, Doc. 59/60).

in industrial output and in capital invested in the industrial sector of economy, on the one hand, and the very slow, almost insignificant growth of the industrial labor force, on the other hand.

In a period of particularly rapid industrial growth in Brazil, the most industrialized country in Latin America, the movement of average employment in 18 main industries was as follows:

	Indexes (Jan. 1, 1955=100)
1955.....	100.1
1956.....	100.1
1957.....	94.7
1958.....	103.6

It is true that there has been a slight rise in industrial employment during 1959 and 1960 but not to the extent expected.<sup>14</sup> This can only be explained as a symptom of the extensive mechanization of new industries, which is considered necessary to their economically efficient operation. This also means that, apart from medium- and small-sized establishments, the capital investment necessary for the employment of an industrial worker has increased considerably.

In interpreting the impact of this trend upon the Latin American labor market, one should bear in mind two facts: First, it has been traditional for Latin American industries to overstaff—a condition which must be remedied if industry is to achieve its goal of higher productivity.<sup>15</sup> Second, certain big industries which have recently come into Latin America are highly mechanized and even automated, despite the presence of overabundant and cheap manpower. The relatively low wage structure might, however, be raised somewhat in the future by minimum wage laws, legal provisions for cost-of-living escalation of wages, and the growing amount of fringe benefits as well as social security charges. As inflation is gradually slowed down or stopped, these labor costs will not be as easily absorbed by price increases for the final product as nowadays.

### Labor-Management Relations

The increasing frequency and severity of conflicts between labor and management, as exemplified by the recent long and wasteful strikes in Argentina, Brazil, Chile, Peru, and Colombia, seriously inhibit the economic growth of Latin America.

Twelve experts on industrial and labor relations from seven Latin American countries, meeting under the auspices of the Pan American Union, recently undertook a thorough analysis of the causes of the present labor unrest as a starting point for the development of national programs as well as for "the plans of action that the Pan American Union should carry out in the future."<sup>16</sup>

Among causes which negatively affect the development of sound and harmonious relations, the group listed:

(1) The existence of unbalanced national economies, dependent in many cases on a single crop or the production of a single exportable commodity, which leads employers to maintain low wage levels, because . . . not producing for domestic consumption, they are not directly affected by the public's low purchasing power, (2) the inadequate . . . system of landholding . . . (3) the uneven distribution of national income . . . (4) the existence of large sectors of the population . . . whose standard of living is deficient . . . (5) the impact of new social and political ideas, together with an awareness of ways and standards of living among the working classes of other, more developed countries, [which] has created the conviction among these peoples that their standards of living and working conditions could and should be improved; a delay in bringing this about gives rise to a permanent feeling of dissatisfaction and unrest . . . (8) imbalance in the labor market . . . (11) obstacles to free trade union association and the existence of paternalistic systems [which] impede the normal development of labor relations.

Another important contributing factor is, in the author's opinion, the disturbing effects upon wages and, indirectly, upon labor-management relations, of monetary instability. Inflation is particularly strong in Brazil, Bolivia, and until recently in Chile, and corrective deflationary stabilization measures have recently been taken in Argentina, Peru, Colombia, and Chile.

The experts laid particular stress on certain unfavorable aspects of "the traditional methods

<sup>14</sup> *Desenvolvimento e Conjuntura, Índices Econômicos* No. 5, May 1959, p. 166 (Rio de Janeiro, Brazil).

<sup>15</sup> This situation was observed by the best industrial inquiry so far conducted in Latin America. It related to the cotton spinning and weaving industry (the most universal and particularly the most expanded old industry below the Rio Grande) in Brazil, Chile, Mexico, Ecuador, and Peru. See *Productividad de la Mano de Obra en la Industria Textil Algodonera de cinco Países Latinoamericanos* (New York, UN, ECLA, 1951).

<sup>16</sup> See Report of the Inter-American Meeting of Experts on Industrial and Labor Relations, Bogota, Colombia, May 9-15, 1960 (Pan American Union, Inter-American Economic and Social Council, June 13, 1960), I-A ECOSOC Series. See also the Peruvian Symposium on Policies and Action in Manpower and Personnel Programs, organized by the International Cooperation Administration (Lima, Peru, June 20-24, 1960). The subject is also to be discussed at the Inter-American Study Conference on Labor-Management Relations in Montevideo, Uruguay, on November 2-12, 1960, convoked by the International Labor Office.

of dealing with labor relations," criticizing indirectly the prevailing orientation of many labor laws in Latin America. This applies to "the strictly legalistic treatment of labor problems," to the underlying concept of a permanent antagonism in the mutual relationship between labor and management, to the improvisation of labor laws "by transposing alien systems of presumed effectiveness," to the "premature intervention of governments in all labor-management conflicts," to "the interference in trade union movements for reasons not connected with labor," and to the lax enforcement of labor laws. The 12 experts, among them 2 ministers of labor, unanimously concluded that labor legislation "should be based on modern criteria that will encourage frank cooperation between labor and management within the framework of national economic development and social well-being." Although these ideas may not be new for other Western countries, for Latin America they embody a revolutionary approach. They are a significant departure from the previous philosophy, in which state action was paramount and labor laws were considered a panacea against all social ills, without giving much attention to free contractual relations between employers and employees.

In the recommendations submitted to the Organization of American States, which also urged scientific research, inter-American seminars, instruction at the university level, adult education, and technical assistance; the experts advocated: (1) a study "of the extent to which the labor legislation of the member countries is enforced, and of the influence that this legislation, when enforced, has had on the improvement of labor relations in the various countries" (an extremely useful, though delicate, recommendation whose execution will certainly cause considerable technical difficulties); and (2) efforts "to

foster the organization of permanent labor-management commissions, both national and inter-American, by industry, for the purpose of developing communications and cooperation between both groups," a recommendation obviously inspired by the ILO industrial committees. Whereas previous OAS labor programs have failed to come up to expectations because they attempted too much,<sup>17</sup> the Bogota recommendations, owing to their realistic orientation, may serve as a better starting point for future OAS social activities.

### Labor Productivity

Latin America is backward in the worldwide campaign to raise productivity standards. Labor productivity<sup>18</sup> is one of the most essential aspects of productivity programs in that region, though in economically more advanced countries it might become less important with growing mechanization and automation.

An ECLA study on the textile industry in 1951<sup>19</sup> showed a low rate of labor productivity and outlined an economically sound approach by which it could be raised immediately and considerably through action by government, management, and labor.

Some Latin American countries, among them Mexico, Brazil, Argentina, Chile, and the Central American nations, have set up in the last 5 years a network of productivity centers to foster improvements in productivity. Unfortunately, perhaps with the exception of the Mexican institute, they are not yet operating very successfully.

One could also hardly give much importance to the direct effects of comprehensive technical assistance programs in this field promoted by several international agencies, although the resources earmarked for this purpose are, in some instances, very generous (e.g., an ILO productivity program initiated in Argentina is assured a total amount of not less than \$5 million from the United Nations "Special Fund").

These shortcomings led the Pan American Union to hold the Inter-American Meeting of Advisers on Productivity in Mexico, April 18-22, 1960.<sup>20</sup> After reviewing the responsibilities of governments, private investors, labor unions, and research and university centers in the field of productivity and analyzing the main pro-

<sup>17</sup> For example, the project to create an Inter-American Labor Institute, which was approved as Resolution No. XXIII in the Final Report of the 7th International American Conference, held in Montevideo, Uruguay, December 3-26, 1933.

<sup>18</sup> See *A Produtividade da Mão-de-Obra na América Latina* (Pan American Union, Inter-American ECOSOC Doc. 49, Add. 5 of June 9, 1960), which reviews such aspects as recruitment, readaptation and rehabilitation, excessive manpower, inadequate wage systems, deficient nutrition, bad health, low levels of education, labor mobility, defects in the organization of work in enterprises, and bad relationships between employers and employees, as well as absenteeism, turnover, lack of adjustment to industrial conditions, unemployment, and certain institutional factors of labor productivity.

<sup>19</sup> See footnote 15.

<sup>20</sup> The Final Report of this meeting was published as Inter-American ECOSOC Doc. OEA/Ser.H/v ES, No. 49, May 12, 1960.



ductivity factors, the group agreed that a Latin American Productivity Center should be established to coordinate and develop, on a proper scientific basis, the productivity campaigns in Latin America.

The goals, the principal fields of activity, the organization and structure of the proposed center, as well as its program of action were set out at the meeting. It seems, however, in view of the latest report of the subcommittee of the "Committee of 21,"<sup>21</sup> set up to "study the formulation of new measures for economic cooperation" in close connection with the well-known program of "Pan American Operation," that in the near future (the next 5 years, say) the emphasis will be shifted to a broad research and technical assistance program, with the center being sidetracked for the time being. The reasons given by the subcommittee are the present lack of economists and engineers who could be assigned to the center and objections to the growing number of inter-American agencies. They do not involve any criticism of the productivity center project as such.

### The Latin American Common Market

The Free Trade Association (with a membership of seven Latin American countries) constituted by the Montevideo Treaty of February 18, 1960, as well as the tripartite (Guatemala, Honduras, and El Salvador, at this moment) Central American Economic Association set up by the convention signed on January 9, 1960, are only the first milestones on the way to the creation of a Latin American common market.

It is evident that the development of a common commercial market in Latin America is inseparable from a regional common labor market, though this goal can hardly be achieved in the next few years. The best utilization of human resources can be attained only through a free exchange of manpower between the Latin American republics. Such a program would not exclude an open-door policy with regard to immigration from other continents but would imply a certain pref-

erential treatment for American workers. Therefore, it does not seem premature to outline the minimum essentials for the multilateral regulation of social consequences of a common market:

1. Liberalization of immigration laws for immigrants from other American countries.
2. Revision of the "labor nationalization acts" (in force in Brazil, Mexico, Costa Rica, Chile, and Cuba, among others) which require companies to hire a certain proportion of nationals and also frequently specify what their share of the payroll must be.
3. Establishment of systematic cooperation between national employment services to facilitate the clearing of employment offers and demands, based on unified classification of occupations and professions.
4. Maintenance of social security rights of American migrants, a mechanism which guarantees that no social security rights acquired in one country are lost upon migrating to another.
5. Equalization of social charges as well as of taxes in the various countries.

There is already considerable movement within Latin America by political refugees, seasonal rural manpower, and frontier residents who work on the other side of the border. However, everything leads one to believe that the impending economic integration of that part of the Western Hemisphere will substantially increase intra-American migrations, particularly by industrial manpower, which so far has been left out of such movements.

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Some of the discussion in this article might create an initial impression of a rather difficult, even somewhat gloomy, position of Latin American labor. This impression would, however, be very far from reality. The upward social mobility in several countries, the workers' increasing intellectual and cultural progress, their increasing organization in labor unions, etc., appear to be highlights of the panorama of Latin America in the troublesome postwar period.

<sup>21</sup> See Pan American Union, OEA Ser. G. VII SUBCECE-71, June 23, 1960, p. 33.



# Wage Developments in Manufacturing During 1959

LILY MARY DAVID AND DONALD L. HELM\*

GENERAL WAGE CHANGES were put into effect for about 8.7 million production and related workers in manufacturing during 1959. These workers accounted for about 83 percent of the 10.5 million employed in factories in which general wage changes occur.<sup>1</sup>

The most common increases effective during the year averaged 9 but less than 10 cents an hour. Expressed as a percentage of average hourly earnings (excluding premium pay for overtime), the most frequent increases amounted to 3½ but less than 4 percent. Considering only increases decided upon during the year and excluding deferred and cost-of-living adjustments, the most common advance was 7 but less than 8 cents an hour, or 3 but less than 3½ percent.

About one-third of the factory production workers were employed where one or more supplementary benefits were introduced or liberalized in 1959. This proportion increased to one-half in those situations where decisions on wages or supplementary benefits were actually made during the year and to two-thirds in union establishments in which settlements were concluded.

## Measures of Wage Change

This analysis of wage developments in manufacturing is the first by the Bureau of Labor Statistics to include nonunion and small union situations. The data on which it is based exclude establishments in which wages are changed only by adjustments for individual workers. Hitherto, the Bureau's summaries of current wage developments have been confined to major collective bargaining situations affecting 1,000 or more workers in nonmanufacturing as well as manufacturing.<sup>2</sup>

This article presents two basically different types of data on general wage changes:

One type shows all general wage changes effective during the year regardless of when they were decided upon or agreed to and includes factories where, by decision or agreement, no change was made. The general wage changes presented in this tabulation, therefore, include cost-of-living escalator adjustments and deferred or improvement factor increases effective in 1959 but decided upon in earlier years, as well as rate adjustments resulting from collective bargaining settlements or unilateral employer decisions reached during the year. These figures are labeled "total wage changes effective in 1959."

The second basic type of data, designed to show only wage changes that reflect the economic climate during the year, is limited to establishments in which there were decisions on wages in 1959—either by negotiation or by unilateral employer action. For long-term contracts concluded in 1959, the changes presented are limited to those going into effect during the first 12 months following the contract date. These data exclude unionized plants in which no collective bargaining on wages was concluded during 1959; however, they include all nonunion establishments that make general wage changes except for a few that had announced 1959 wage plans in earlier years. They are designated "wage decisions reached in 1959."

Subsidiary tabular materials show the total amount of changes affecting workers whose wage rates were changed by 1959 decisions. In other words, they add to the changes decided on during 1959 any automatic cost-of-living escalator adjustments these same workers received during the calendar year. These data are included on the assumption that the size of the negotiated changes in wage rates may be affected by the existence of cost-of-living escalator clauses. They are called

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<sup>1</sup> General wage changes include adjustments affecting 10 percent or more of the production and related workers in an establishment but exclude merit and automatic length of service increases.

The measure of wage changes used is the average change for all workers covered by a collective bargaining settlement or for all production workers in an establishment, even though, in a few instances, the changes applied to some workers but not all. Only about 225,000 workers were employed in establishments where general wage increases in 1959 were confined to part of the work force.

<sup>2</sup> Statistical summaries of major collective bargaining situations in non-manufacturing as well as in manufacturing establishments will continue to be published as part of the Current Wage Developments reports. The 1959 summary is in Current Wage Developments, No. 151.

TABLE 1. GENERAL WAGE CHANGES<sup>1</sup> IN MANUFACTURING, 1959

[Number in thousands]

Type and amount of wage action	Total wage changes effective in 1959 <sup>2</sup>		Wage decisions reached in 1959 <sup>3</sup>		Total wage changes effective where wage decisions were reached in 1959 <sup>4</sup>	
	Production and related workers					
	Approximate number	Percent	Approximate number	Percent	Approximate number	Percent
Total <sup>1</sup> .....	10,504	100.0	6,678	100.0	6,678	100.0
No wage change.....	1,809	17.2	1,065	15.9	1,065	15.9
Decreases in wages.....	4	( <sup>6</sup> )	3	( <sup>6</sup> )	3	( <sup>6</sup> )
Increases in wages <sup>7</sup> .....	8,692	82.7	5,611	84.0	5,611	84.0
CENTS PER HOUR						
Under 3 cents.....	1,043	9.9	240	3.6	225	3.4
3 and under 5 cents.....	376	3.6	337	5.0	289	4.3
5 and under 6 cents.....	831	7.9	654	9.8	670	10.0
6 and under 7 cents.....	646	6.2	576	8.6	513	7.7
7 and under 8 cents.....	1,138	10.8	974	14.6	939	14.1
8 and under 9 cents.....	798	7.6	739	11.1	626	9.4
9 and under 10 cents.....	1,309	12.5	355	5.3	512	7.7
10 and under 11 cents.....	1,193	11.4	783	11.7	837	12.5
11 and under 13 cents.....	653	6.2	341	5.1	376	5.6
13 and under 15 cents.....	330	3.1	345	5.2	274	4.1
15 and under 17 cents.....	157	1.5	131	2.0	154	2.3
17 and under 19 cents.....	91	.9	37	.5	88	1.3
19 cents and over.....	96	.9	71	1.1	83	1.2
Not specified or not computed <sup>8</sup> .....	30	.3	28	.4	28	.4
PERCENT						
Under 1 percent.....	910	8.7	127	1.9	116	1.7
1 and under 2 percent.....	336	3.2	313	4.7	293	3.9
2 and under 2½ percent.....	404	3.8	289	4.3	283	4.2
2½ and under 3 percent.....	631	6.0	545	8.2	501	7.5
3 and under 3½ percent.....	1,158	11.0	923	13.8	832	12.5
3½ and under 4 percent.....	1,858	17.7	883	13.2	974	14.6
4 and under 4½ percent.....	975	9.3	545	8.2	611	9.1
4½ and under 5 percent.....	658	6.3	378	5.7	398	6.0
5 and under 5½ percent.....	621	5.9	596	8.9	567	8.5
5½ and under 6 percent.....	283	2.7	290	4.3	265	4.0
6 and under 7 percent.....	385	3.7	290	4.3	342	5.1
7 and under 8 percent.....	269	2.6	248	3.7	263	3.9
8 and under 9 percent.....	73	.7	60	.9	71	1.1
9 and under 10 percent.....	37	.4	30	.6	37	.6
10 percent and over.....	62	.6	57	.9	58	.9
Not specified or not computed <sup>8</sup> .....	30	.3	28	.4	28	.4

<sup>1</sup> For definition, see text footnote 1.<sup>2</sup> Changes in wage rates negotiated or decided upon and effective during 1959 plus increases effective in 1959 but decided upon in earlier years and cost-of-living escalator adjustments effective during the year.<sup>3</sup> Changes in wage rates negotiated or decided upon and effective during 1959; excludes changes effective in 1959 but decided upon in earlier years, cost-of-living escalator adjustments, and changes decided upon in 1959 but effective in future years.<sup>4</sup> Changes in wage rates negotiated or decided upon and effective during the year plus cost-of-living escalator adjustments effective during the year in these same establishments; excludes changes effective in 1959 but decided earlier and changes decided in 1959 but effective in future years.<sup>5</sup> Includes only establishments that have a policy of making general wage changes; excludes about 1,245,000 workers in nonunion establishments reporting that they never make general wage changes as well as 108,000 in union establishments (72,000 of these in large union situations) in which actions on wages in 1959 were not known.<sup>6</sup> Employment totals shown for total wage changes effective in 1959 include but those for wage decisions reached in 1959 and total wage changes effective where decisions were reached in 1959 exclude employment in union establishments (780,000 in all union and 519,000 in large union establishments) in which there was either no bargaining on wages in 1959 or bargaining was not concluded, as well as a small number of workers in nonunion establishments in which deferred wage increases went into effect in 1959.<sup>7</sup> Less than 0.05 percent.<sup>8</sup> In the case of union establishments, includes negotiated increases scheduled to go into effect during the 12-month period following the effective date of the agreement. In other establishments, includes increases effective in the calendar year.

The columns for total wage changes effective in 1959 include but the others exclude deferred increases effective during the year. For inclusion and exclusion of cost-of-living adjustments, see footnotes 2, 3, and 4.

<sup>9</sup> Insufficient information to compute amount of increase.

NOTE: Because of rounding, sums of individual items may not equal totals.

"total wage changes effective where wage decisions were reached in 1959."

### Wage Changes Effective in 1959

General wage changes were widespread for production and related workers in manufacturing in 1959. Of the estimated 10.5 million such workers employed in factories that have a policy of making general wage changes, about 8.7 million, or 83 percent, received adjustments during the year (table 1).<sup>3</sup>

About 1.8 million workers, or 17 percent, received no general wage-rate increase in 1959 and about 4,000, or less than 0.1 percent, received a pay reduction. The workers whose rates of pay did not change comprised four groups: (1) About 234,000 were employed in unionized plants where bargaining over wages during 1959 resulted in agreement not to change wage rates; (2) another 159,000 were employed where wage negotiations had not been concluded by year end;<sup>4</sup> (3) about 621,000 were employed where there was no bargaining on wages during 1959, because contracts either did not permit bargaining or were not reopened; and (4) the remaining 795,000 were mostly in nonunion firms. Substantial numbers of small establishments apparently delayed negotiations or decisions on wage changes pending the outcome of basic steel negotiations.

The most common wage increases effective in 1959 were 9 but less than 10 cents an hour; these applied to one out of eight production workers employed in factories where general wage changes are made. Increases of 10 but less than 11 cents and 7 but less than 8 cents each accounted for more than one-tenth of the workers. When the increases are expressed as a percentage of average hourly earnings excluding premium pay for overtime, they averaged 3½ but less than 4 percent for almost 18 percent of the workers; another 11 percent received 3 but less than 3½ percent raises. Increases of 3½ percent or more went to about three-fifths of the workers receiving raises

<sup>3</sup> An estimated 55,000 manufacturing establishments with about 134 million of the 11.9 million production and related workers normally change wage rates only on an individual basis and do not make general wage changes. Most of these nonunion firms are small but some employ substantial numbers of workers. These establishments are excluded from this summary.

Employment data used here refer to January 1959, the base date used for the summary.

<sup>4</sup> This figure excludes workers in the basic steel and related industries where negotiations were not concluded but where there was a cost-of-living escalator adjustment during 1959.

during the year and over half were employed where increases averaged 8 or more cents.

Of the increases effective in 1959, those for about 5.6 million workers resulted from either negotiations concluded during the year or, in nonunion situations, employer decisions reached during the year (table 2). The most common increase decided upon in 1959 amounted to 7 but less than 8 cents an hour. The most frequent increase, expressed as a percentage of average hourly earnings excluding overtime, was 3 but less than 3½ percent, covering 13.8 percent of all workers affected by 1959 wage decisions. Increases averaging 3½ but less than 4 percent were almost as common.

Since cost-of-living escalator adjustments were relatively small during 1959 and, moreover, affected relatively few workers in establishments

where wage decisions were concluded during the year, the addition of these adjustments to increases decided upon in 1959 did not appreciably change the picture of wage increases.

An unusually large proportion of the 3 million manufacturing production workers covered by cost-of-living escalator clauses—about 800,000—received only an escalator adjustment during the year. Most of these workers were in the basic steel and steel fabricating industries where negotiations either were not concluded during 1959 or did not provide for any increase during 1959 beyond a 1-cent cost-of-living escalator adjustment received under the previous contract.

Of the workers receiving increases in 1959, about 2.3 million, concentrated in unionized automobile, automobile parts, farm and electrical equipment, and aircraft factories, received pay increases

TABLE 2. COMPARISON OF GENERAL WAGE CHANGES<sup>1</sup> IN ALL MANUFACTURING AND UNION ESTABLISHMENTS, 1959

Type and amount of wage action	Total wage changes effective in 1959 <sup>1</sup>			Wage decisions reached in 1959 <sup>2</sup>			Total wage changes effective where wage decisions were reached in 1959 <sup>4</sup>		
	Percent of production and related workers in—								
	All establishments	All union establishments <sup>3</sup>	Large union situations <sup>5</sup>	All establishments	All union establishments <sup>3</sup>	Large union situations <sup>5</sup>	All establishments	All union establishments <sup>3</sup>	Large union situations <sup>5</sup>
Total <sup>1</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No wage change.....	17.2	12.9	12.4	15.9	6.2	4.8	15.9	6.2	4.8
Decreases in wages.....	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	.1	.1	( <sup>6</sup> )	.1	.1
Increases in wages <sup>1</sup> .....	82.7	87.0	87.6	84.0	93.7	95.1	84.0	93.7	95.1
CENTS PER HOUR									
Under 3 cents.....	9.9	11.8	15.3	3.6	3.7	2.4	3.4	3.5	2.1
3 and under 5 cents.....	3.6	3.1	1.8	5.0	5.1	4.2	4.3	3.9	2.2
5 and under 7 cents.....	14.1	12.7	7.2	18.4	18.3	13.0	17.7	17.5	12.3
7 and under 9 cents.....	18.4	19.4	16.7	25.7	31.5	36.6	23.4	28.1	31.0
9 and under 11 cents.....	23.9	26.3	31.2	17.0	18.6	18.7	20.2	23.1	25.5
11 and under 13 cents.....	6.2	7.0	8.1	5.1	5.9	6.1	5.6	6.7	7.5
13 and under 15 cents.....	3.1	3.2	3.6	5.2	6.1	9.3	4.1	4.7	6.5
15 and under 17 cents.....	1.5	1.4	1.2	2.0	1.9	1.9	2.3	2.5	2.5
17 and under 19 cents.....	.9	1.1	1.4	.5	.7	.7	1.3	1.9	3.1
19 cents and over.....	.9	.7	.7	1.1	1.1	1.3	1.2	1.1	1.3
Not specified or computed <sup>10</sup> .....	.3	.4	.4	.4	.7	.9	.4	.7	.9
PERCENT									
Under 1 percent.....	8.7	10.8	15.3	1.9	2.4	2.4	1.7	2.3	2.1
1 and under 2 percent.....	3.2	3.1	1.6	4.7	5.4	4.1	3.9	4.2	2.8
2 and under 3 percent.....	9.9	10.4	6.8	12.5	14.8	11.8	11.7	14.0	10.9
3 and under 4 percent.....	28.7	31.9	34.7	27.0	32.9	36.3	27.9	32.6	36.2
4 and under 5 percent.....	15.5	16.9	16.9	13.8	15.7	13.9	15.1	17.6	16.4
5 and under 6 percent.....	8.6	7.5	7.5	13.3	13.8	19.3	12.5	12.6	16.6
6 and under 7 percent.....	3.7	2.9	2.2	4.3	3.1	2.3	5.1	4.5	4.7
7 and under 8 percent.....	2.6	1.8	1.6	3.7	2.9	3.2	3.9	3.2	3.9
8 and under 9 percent.....	.7	.4	.1	.9	.7	.1	1.1	.7	.1
9 and under 10 percent.....	.4	.3	.1	.6	.7	.4	.6	.6	.3
10 percent and over.....	.6	.4	.2	.9	.7	.5	.9	.7	.6
Not specified or computed <sup>10</sup> .....	.3	.4	.4	.4	.7	.9	.4	.7	.9
Approximate number of production and related workers (in thousands) in manufacturing establishments with general wage change policies <sup>7</sup> .....	10,504	8,071	5,010	6,678	4,301	2,121	6,678	4,301	2,121

<sup>1</sup> For definition, see text footnote 1.

<sup>2</sup> For definition, see footnote 2, table 1.

<sup>3</sup> For definition, see footnote 3, table 1.

<sup>4</sup> For definition, see footnote 4, table 1.

<sup>5</sup> Establishments in which a majority of the production and related workers were covered by union agreements.

<sup>6</sup> Establishments covered by union agreements affecting 1,000 or more workers. Included are not only establishments normally employing 1,000

or more workers, but smaller establishments covered by a multiunit agreement affecting 1,000 or more workers.

<sup>7</sup> For groups covered by the various totals, see footnote 5, table 1.

<sup>8</sup> Less than 0.05 percent.

<sup>9</sup> For scope and employment coverage, see footnote 7, table 1.

<sup>10</sup> Insufficient information to compute amount of increase.

NOTE: Because of rounding, sums of individual items may not equal totals.

TABLE 3. CHANGES IN SUPPLEMENTARY PRACTICES IN MANUFACTURING, 1959

Item	Percent of production and related workers in—		
	All establishments	All union establishments <sup>1</sup>	Large union situations <sup>2</sup>
Total <sup>3</sup> .....	100.0	100.0	100.0
Not changing supplementary practices.....	65.2	61.8	65.8
Reducing supplementary practices.....	.2	.1	.1
Liberalizing or establishing one or more supplementary practices <sup>4</sup> .....	34.6	38.1	34.0
Premium pay.....	3.7	4.4	4.9
Shift differentials.....	4.0	4.9	3.6
Paid holidays.....	12.4	14.9	16.1
Paid vacations.....	12.1	13.9	14.6
Pensions <sup>5</sup> .....	11.6	13.9	16.0
Health and welfare plans <sup>6</sup> .....	21.5	24.0	21.5
Severance pay.....	2.2	2.8	3.7
Supplemental unemployment benefits <sup>7</sup> .....	1.0	1.2	1.2
Jury duty pay.....	1.2	1.5	1.9
Paid funeral leave.....	1.8	2.3	3.2
Paid sick leave.....	.8	.9	1.0
Reporting or call-in time.....	.2	.3	.5
Other practices.....	2.5	2.9	4.0
Approximate number of production and related workers (in thousands) in manufacturing establishments with general wage change policies <sup>8</sup> .....	10,504	8,071	5,010

<sup>1</sup> See footnote 5, table 2.<sup>2</sup> See footnote 6, table 2.<sup>3</sup> Includes employment in all establishments that have a policy of making general wages changes, including those in which there was either no bargaining in 1959 or bargaining was not concluded. Excludes workers in establishments in which general wage changes are normally not made; some of these establishments did change supplementary practices in 1959. (For employment in such establishments, see footnote, 5, table 1.)<sup>4</sup> These totals are smaller than the sum of individual items since some actions affected more than one item. Includes 26,900 workers (18,600 in all union and 4,600 in large union situations) in establishments in which some supplementary practices were liberalized and others were reduced.<sup>5</sup> Includes actions in which contributions were increased to maintain existing benefits and excludes actions increasing benefits without increased employer contributions.

NOTE: Because of rounding, sums of individual items may not equal totals.

agreed to or announced in earlier years.<sup>5</sup> A majority of these workers also received cost-of-living escalator increases. The most common pay advances effective for this group of workers, as for all workers receiving increases in 1959, totaled 9 but less than 10 cents, or 3½ but less than 4 percent.

### Nonuniform Wage Adjustments

In recent years, increasing attention has been paid to the problem of maintaining differentials in pay among occupations. In the years immediately after World War II, the prevailing tendency toward uniform cents-per-hour increases had narrowed percentage differentials. By contrast, in 1959, 4.7 million factory production workers—more than half of those receiving increases—were employed in establishments in which wage adjustments were not uniform for all workers.

Uniform percentage increases or adjustments in which cents-per-hour increases were greater for

those in higher wage brackets applied to about 3.2 million workers, or 37 percent of those receiving pay increases during 1959. About 4 percent of the workers were employed where uniform cents-per-hour increases were supplemented by extra increases to skilled workers, while 6 percent were employed where special increases were given to other types of workers. A million workers, or about 11 percent, were employed where other types of nonuniform adjustments were made—for example, where increases differed for time and piece workers.

An analysis limited to negotiated increases would show a higher proportion receiving non-uniform changes, since most of the 800,000 workers who got only cost-of-living escalator adjustments, included in total changes effective in 1959, received uniform money amounts.

### Supplementary Benefits

In addition to these general wage changes, one or more supplementary benefits were liberalized or added during 1959 in establishments employing about 3.6 million factory production or related workers—about one-third of all those employed in the manufacturing plants covered by this summary (table 3). Most frequently involved were health and welfare benefits, improved in plants with almost 2.3 million workers, or about one-fifth of the total. Paid holidays, paid vacations, and pensions were each changed in establishments employing about 1¼ million workers.

Unlike wages, supplementary practices are most commonly changed only in the years in which long-term agreements are concluded. Hence, limiting the analysis to establishments (both union and nonunion) in which wage decisions were made during 1959 raises the proportion of workers employed where supplementary practices were liberalized or introduced to slightly more than one-half.

### Developments in Union Situations

Of the 11.9 million production and related workers employed in manufacturing in January 1959, slightly more than two-thirds worked in factories in which a majority of workers were

<sup>8</sup> See Deferred Increases and Escalator Clauses (in Monthly Labor Review, December 1958, pp. 1362-1365), which relates to major collective bargaining situations.



covered by collective bargaining agreements. Of the 10.5 million workers covered by this analysis, the proportion was still higher—almost four-fifths. Consequently, separate information is shown in tables 2 and 3 for all unionized establishments as well as for unionized establishments covered by agreements affecting 1,000 or more workers.

Comparisons between union establishments and manufacturing as a whole may reflect differences in the extent of unionization among industry groups and, hence, differences in industry patterns of wage change as well as in establishment size. Unionization is much more widespread in such industries as metalworking, paper, and rubber, than in textiles, leather, lumber, and furniture, for example.<sup>6</sup> Unionization is also more common in large than in small establishments.

Similarly, differences between all union establishments and major union situations may be related to industry differences. The information for large unionized situations reflects mainly developments in such industries as metalworking, rubber, and apparel (where individual companies are small but association bargaining is important). The smaller situations included in the union total, on the other hand, are heavily concentrated in industries such as food and printing.

With the high proportion of workers in major collective bargaining situations accounted for by industries where pattern bargaining is widespread (e.g., automobiles, rubber, meatpacking, nonferrous smelting and refining, and pulp and paper), the size of the wage increases was somewhat more uniform among major union situations than among all union or all manufacturing establishments. Because employees in basic steel and related

industries received only a 1-cent cost-of-living increase during the year, the proportion of workers for whom the total wage change effective during the year was under 1 percent or under 3 cents was appreciably greater in major union manufacturing situations than in all manufacturing (table 2).

Unionized and all manufacturing establishments differed significantly in the proportion of workers receiving wage increases and in the extent to which supplementary benefits were changed for workers in establishments in which decisions were reached. Whereas 17 percent of the production workers in manufacturing as a whole received no wage increase during 1959, the corresponding proportion in all union and large union situations was between 12 and 13 percent. In situations where wage decisions were reached during the year, the contrast was even greater.

Among unionized plants in which bargaining was concluded, about two-thirds of the workers got improved benefits; in large union situations, the proportion was about four-fifths.<sup>7</sup> As previously indicated, the comparable proportion for all manufacturing was slightly more than one-half.

These comparisons based on establishments in which wage decisions were reached are influenced by lack of a breakdown for nonunion establishments comparable to the classification of union situations by whether negotiations over wages were concluded during the year. The union plants in which negotiations were not concluded are omitted entirely from the summary of wage decisions in tables 1 and 2. Of necessity, however, both tables include all nonunion establishments except the small group in which the existence of deferred wage increases (decided on prior to 1959) indicates that no wage decisions were reached in 1959.

If changes in supplementary practices are related to the total number of workers employed, including those in establishments in which there was no bargaining on wages during the year, the difference between unionized and all establishments largely disappears (table 3). However, in all union establishments, as well as in major collective bargaining situations, the number of workers affected by changes in more than one benefit was greater than in all manufacturing. Changes in pensions were appreciably more frequent in major collective bargaining situations than in all manufacturing.

<sup>6</sup> For data on the extent of union contract coverage by industry group, see *Collective Bargaining Coverage in Factory Employment, 1958* (in *Monthly Labor Review*, April 1960, pp. 345-349).

<sup>7</sup> In this summary, all changes in supplementary benefits in major collective bargaining situations were assigned to the year in which they were negotiated even though some agreements made certain benefits effective in subsequent years. In other—nonunion and small union—situations, changes in supplementary benefits were included in the summary for the year in which they went into effect. This difference in approach may slightly understate the proportion of workers in union situations as compared with all situations affected by changes in benefits effective in 1959. Changes in supplementary practices are expressed in terms of the total number of production workers in establishments in which the practice was changed even though all of them would not be affected immediately (for example, by addition of a fourth week of vacation for workers with more than 20 years' service).

For information on changes in supplementary practices put into effect in those situations in which wage decisions were made during 1959, classified according to the size of the change in wage rates put into effect, see *Wage Developments in Manufacturing, 1959—Summary Release* (August 1960, available on request to the Bureau of Labor Statistics).

# New Organizing by Unions During the 1950's

JOSEPH KRISLOV\*

THE ORGANIZATION of unorganized workers has been and continues to be a major objective of the American labor movement. Success in new organizing depends largely upon the ability of unions to win representation rights (usually through elections conducted by the National Labor Relations Board) and then to negotiate a contract with the employer. Although knowledge of the success of new organizational efforts is important for an appraisal of the current status of the American labor movement, few empirical data on the subject have been available. As Professor Spielmann pointed out in 1956, the tabulations in the annual reports of NLRB do not distinguish between organizational and raiding elections.<sup>1</sup>

The data on new organizing presented in this article were specially tabulated by the National Labor Relations Board for the author. They cover representation elections conducted by the Board for 5 alternate fiscal years, beginning with 1951. The elections in these 5 years constitute 50.5 percent of the 53,184 representation elections during the entire decade of the 1950's, and the eligible voters in the 5 years studied account for 48.5 percent of the 5,796,649 persons eligible to vote in all representation elections conducted during the decade. Moreover, the selected fiscal years include periods of recession and high economic activity as well as "normal" times. Hence, it can be assumed that the data for the 5 years reasonably reflect the pattern of elections during the entire decade.

The NLRB derived the data from their punch-card records of petitions for representation elections. Cards for elections in which the petition indicated the existence of a prior bargaining agent were eliminated, to yield a tabulation of all elections in which a union was seeking to organize an unorganized unit. Two measures of organizational effort were provided: a count of elections and a count of eligible voters. The data on the number of elections and of eligible voters were further separated into five industrial classifications: manufacturing, wholesale trade, retail trade, services, and other industries.

Several conclusions emerge from an analysis of these data. First, about half of the workers eligible to vote in NLRB-conducted elections in unorganized units during the period were in units choosing collective bargaining agents. Second, the number of both elections and eligible voters in unorganized units increased as a proportion of all NLRB elections in 1957, after the AFL-CIO No-Raiding Agreement went into effect,<sup>2</sup> but the absolute number of eligible voters in unorganized units was lower in the last 3 years studied than in the 2 earlier years. Third, the proportions of union victories and eligible voters choosing a collective bargaining agent declined substantially during the 1950's. In the last 3 selected years, an average of only 125,000 workers chose a bargaining agent. Finally, about two-thirds of the elections and over four-fifths of the eligible voters were in manufacturing; only nominal proportions of elections and voters were in the relatively unorganized trade and service sectors. However, unions were generally as successful in the latter industries as in manufacturing.

## New Organizing Elections

Table 1 relates the number of, and eligible voters in, new organizing elections to all NLRB representation elections for the 5 years. Approximately 1.6 million workers were eligible to vote in these elections. For the entire decade, then, it

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<sup>1</sup> John V. Spielmann, *Measuring the Results of Organizational Union Representation Elections* (in *Industrial and Labor Relations Review*, Ithaca, N.Y., January 1956, p. 282).

<sup>2</sup> The agreement became effective on June 8, 1964, but the data for fiscal year 1955 do not fully reflect its influence since they undoubtedly include elections resulting from petitions filed before the effective date. (For text of the agreement, see *Monthly Labor Review*, January 1964, pp. 33-40.)

TABLE 1. VOTING IN NEW ORGANIZING ELECTIONS CONDUCTED BY THE NATIONAL LABOR RELATIONS BOARD, SELECTED YEARS, 1951-59

Item	Fiscal year ending June 30—				
	1951	1953	1955	1957	1959
All representation elections <sup>1</sup> .....	6,432	6,050	4,215	4,729	5,428
New organizing elections:					
Number.....	5,122	4,704	3,191	4,106	4,473
Percent of all elections.....	80	78	76	87	82
Eligible voters in all representation elections.....	666,556	737,998	515,995	458,904	430,023
Eligible voters in new organizing elections:					
Number.....	378,340	365,695	242,071	307,048	281,443
Percent of all voters.....	57	50	47	67	65
Union victories in new organizing elections:					
Number.....	3,500	3,083	1,035	2,428	2,588
Percent of all new organizing elections.....	70	66	61	59	58
Eligible voters in union victories:					
Number.....	228,327	221,283	128,868	124,771	122,059
Percent of voters in all new organizing elections.....	60	61	53	41	43

<sup>1</sup> Excludes decertification elections, which typically account for about 3 percent of all representation elections.

can be assumed that over 3 million unorganized workers were eligible to vote in elections conducted by the NLRB.

As indicated in table 1, at least three-fourths of all NLRB representation elections were held in unorganized units. The proportion of elections in unorganized units declined slightly from 1951 to 1955, but increased to 87 percent in 1957 and, although lower in 1959, was still 82 percent. The increased proportion of elections in unorganized units in the latter 2 years indicates that the No-Raiding Agreement has had some success in reducing the number of raids.<sup>3</sup>

Because unions are more likely to raid larger units, the proportion of eligible voters in new organizing elections has been consistently much lower than the proportion of new organizing elections. Nevertheless, the trend for eligible voters in new organizing elections has been similar to that for elections. The proportion of eligible voters in unorganized units declined from 1951 to 1955, but increased to 67 percent in 1957 and then receded to 65 percent in 1959. The increased proportion of voters in unorganized units also indicates that the No-Raiding Agreement has had some success in reducing the number of raids.

Despite the increased proportion of eligible voters in new organizing elections in 1957 and 1959, the actual number of eligible voters in these elections was less than 600,000. In 1951 and 1953, nearly 750,000 workers were eligible to vote

in new organizing elections. These data tend to confirm the view that there have been almost no large-scale unionization attempts during the 1950's.<sup>4</sup>

Except for 1959, the average number of eligible voters in unorganized units was relatively stable during the 5 selected years. The average size in 1951 was 74; in 1953, it was 78; in 1955, 76; in 1957, 75; but in 1959, it was only 63.

### Union Victories

Table 1 also relates the elections won by unions and eligible voters therein to all new organizing. A total of slightly over 825,000 workers were eligible to vote in the elections in which unions received a majority. Hence, it is probable that roughly twice that number were eligible to vote in unorganized units in which unions received a majority vote during the 1950's. It would, however, be erroneous to assume that all these workers were added to union membership rolls. Despite its victory, a union may have been unable to negotiate a contract and may have subsequently lost worker support. Moreover, even if the union did negotiate a contract, all of

<sup>3</sup> See Joseph Krislov, *The No-Raiding Agreements After Five Years* (in *Labor Law Journal*, Chicago, December 1959, pp. 861-866, 894).

<sup>4</sup> Joseph Shister, *The Impact of the Taft-Hartley Act on Union Strength and Collective Bargaining* (in *Industrial and Labor Relations Review*, Ithaca, N.Y., April 1958, p. 343).

TABLE 2. PERCENTAGE DISTRIBUTION OF NEW ORGANIZING ELECTIONS AND ELIGIBLE VOTERS BY MAJOR INDUSTRIES, SELECTED YEARS, 1951-59

Industry	Fiscal year ending June 30—				
	1951	1953	1955	1957	1959
<b>Elections</b>					
All industries.....	100.0	100.0	100.0	100.0	100.0
Manufacturing.....	67.9	65.1	68.3	68.6	61.9
Wholesale trade.....	8.9	8.0	9.6	9.7	8.9
Retail trade.....	10.8	11.9	8.8	9.6	12.0
Services.....	2.4	2.1	1.7	1.8	4.0
Other industries.....	10.0	12.9	11.7	10.2	13.1
<b>Eligible voters</b>					
All industries.....	100.0	100.0	100.0	100.0	100.0
Manufacturing.....	84.9	83.3	80.9	81.3	77.2
Wholesale trade.....	3.0	4.0	3.4	3.5	3.7
Retail trade.....	4.9	4.7	7.5	7.6	7.5
Services.....	1.0	.9	.6	.9	2.4
Other industries.....	6.1	7.3	7.6	6.6	9.2

NOTE: The sums of individual items may not equal totals because of rounding.

TABLE 3. PERCENTAGE OF NEW ORGANIZING ELECTIONS AND ELIGIBLE VOTERS IN UNITS CHOOSING BARGAINING AGENTS IN FOUR INDUSTRIAL CLASSIFICATIONS, SELECTED YEARS, 1951-59

Industry	Fiscal year ending June 30—				
	1951	1953	1955	1957	1959
<b>Elections</b>					
Manufacturing.....	71	65	59	57	57
Wholesale trade.....	71	68	61	62	58
Retail trade.....	58	62	60	61	52
Services.....	76	61	77	71	68
<b>Eligible voters</b>					
Manufacturing.....	60	60	52	39	40
Wholesale trade.....	70	68	50	58	58
Retail trade.....	52	57	67	40	43
Services.....	78	45	78	74	64

the workers did not necessarily join the union. Whether these particular workers became union members or not, however, total union membership in the United States increased by 2.7 million from the end of 1949 to the end of 1958.<sup>5</sup>

The proportion of union victories declined in each year, from 70 percent in 1951 to 58 percent in 1959. Similarly, the eligible voters in units choosing representation declined from about 60 percent in both 1951 and 1953 to 41 percent in 1957. Unions won a slightly higher proportion—43 percent—in 1959. These data tend to confirm the view that successful organizing has become increasingly more difficult in the past decade.<sup>6</sup>

The average number of eligible voters in units won by unions was relatively stable in the first 3 years studied: 64 in 1951, 72 in 1953, and 67 in 1955. In 1957 and 1959, however, the average size of units won by unions dropped to 51 and 47, respectively. In each of the 5 selected years, the average size of units won by unions was less than

that of all units in new organizing elections, which was given in the preceding section. The differences, although fairly small, suggest that unions have been somewhat less successful in elections in large than in small unorganized units.<sup>7</sup>

### Industrial Distribution

About two-thirds of the new organizing elections and four-fifths of all eligible voters for the 5 selected years were in manufacturing (table 2). Only 22 percent of the elections and about 11 percent of the eligible voters were in wholesale trade, retail trade, and services. Thus, the organizational efforts of the labor movement have remained largely concentrated in manufacturing.

There is, however, some evidence of increased organizational effort in wholesale trade, retail trade, and services. As indicated in table 2, the proportion of eligible voters in retail trade in 1955, 1957, and 1959 was about 1½ times that in 1951 and 1953. Secondly, 1959 shows some decrease in the proportion of both elections and eligible voters in manufacturing, and some increase in the proportion of elections in retail trade and services and in the proportion of eligible voters in services. If the 1959 pattern of elections is maintained during the 1960's, there may be reason to expect considerable organizational effort in these three relatively unorganized industries. This prospect is consistent with the anticipated higher rate of growth in employment in trade and services than in manufacturing.<sup>8</sup>

Finally, the union victory rate in wholesale trade, retail trade, and services compares favorably with that in manufacturing (table 3). Unions won a higher percentage of elections, compared with manufacturing, in wholesale trade in 4 of the 5 years; in retail trade in 2 of the 5 years; and in services in 4 of the 5 years. In addition, a greater proportion of employees chose collective bargaining agents in wholesale trade than in manufacturing in 4 of the 5 years; in retail trade in 3 of the 5 years; and in services in 4 of the 5 years. While few of these differences are statistically significant, they suggest that new organizing has been at least as successful in the three relatively unorganized industries as in manufacturing;

<sup>5</sup> See Directory of National and International Labor Unions in the United States, 1959 (BLS Bull. 1267, 1960).

<sup>6</sup> Harold W. Davey, *The Operational Impact of the Taft-Hartley Act Upon Collective Bargaining Relationships*, in Harold W. Davey, Howard S. Kaltenborn, and Stanley H. Rittenberg, eds., *New Dimensions in Collective Bargaining* (New York, Harper and Brothers, 1959), pp. 186-187.

<sup>7</sup> In any case, about four-fifths of all NLRB representation elections conducted during the 1950's—in organized as well as unorganized units—involved bargaining units of less than 100 workers. See Appendix Statistical Tables in the annual reports of the National Labor Relations Board for the fiscal years 1950-59.

<sup>8</sup> See *Manpower—Challenge of the 1960s* (U.S. Department of Labor, 1960), p. 9.



# The Reactions of Employees to Office Automation

EINAR HARDIN\*

WHAT ARE THE CHARACTERISTICS of changes in work environment caused by the installation of an electronic computer? How do employees feel about the computer and the changes it brings? How do employees in departments that are affected by automation differ from those in unaffected departments in their experiences with changes, regardless of cause, in work environment? How do affected and unaffected departments differ with respect to changes in job satisfaction during the installation period and to job satisfaction prevailing after the installation? The present study addresses itself to these questions. It is based on data collected in two questionnaire surveys conducted in a medium-size insurance company, one before and one after the installation of an IBM 650 electronic data processing machine.<sup>1</sup>

## Scope and Methodology

The insurance company consisted of a home office located in a small midwestern city (where it was the largest employer of clerical personnel), a branch office situated in a metropolitan area, and claims adjustment offices in various cities. For several years preceding the computer installation, total company full-time employment had remained at approximately 400 persons, and part-time employment was negligible. No layoffs had occurred for at least 5 years. However, employment had declined in the home office and risen in the branch office, primarily as a result of the

transfer of many activities from the home to the branch office and the movement, a year or two before, of all home office activities into a new single building from several inadequate facilities. There were few personnel transfers among offices. The company was not a very profitable one but was known as a good employer.

An International Business Machines 650 electronic data processing machine, a standard model with card input and output and with ordinary magnetic drum memory, was installed in the home office in December 1957. After 2 weeks' testing of equipment and programs, the computer was successively given the tasks of checking premium computations performed by agents, computing premiums and assembling policy-declaration data for policies written in the home office, and compiling statistical and accounting reports.

The checking of agents' computations and the processing of policies written in the home office were fully automated by the beginning of May 1958. Conversion of other tasks was not completed until the fall of 1958 or later, but nevertheless, computer utilization, including time for machine testing and repair, rose from 15 percent in January 1958 to 84 percent in April 1958.<sup>2</sup>

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<sup>1</sup> Empirical research addressing itself at least in part to the first two questions has been published by Harold F. Craig, *Administering a Conversion to Electronic Accounting* (Boston, Harvard University, Graduate School of Business Administration, 1955); *The Introduction of an Electronic Computer in a Large Insurance Company* (U.S. Department of Labor, BLS Studies in Automatic Technology No. 2, 1955; and *Monthly Labor Review*, January 1956, pp. 17-19); *Adjustment to an Automatic Airline Reservation System* (in *Monthly Labor Review*, September 1956, pp. 1014-1016); Floyd C. Mann, *The Impact of Electronic Accounting Equipment on the White Collar Worker in a Public Utility Company, in Man and Automation* (New Haven, Conn., Yale University Technology Project, 1956), pp. 32-39; Floyd C. Mann and Lawrence K. Williams, *Organizational Impact of White Collar Automation*, in *Proceedings of the 11th Annual Meeting, Industrial Relations Research Association* (Madison, Wis., IRRA Publication 22, 1959), pp. 59-69; C. Edward Weber, *Impact of Electronic Data Processing on Clerical Skills* (in *Personnel Administration*, Washington, January-February 1959, pp. 20-26); and *Change in Managerial Manpower With Mechanization of Data Processing* (in *Journal of Business*, Chicago, Vol. 32, 1959, pp. 151-163); and Eugene H. Jacobson and others, *Employee Attitudes Toward Technological Change in a Medium Sized Insurance Company* (in *Journal of Applied Psychology*, Washington, Vol. 43, 1959, pp. 349-354). A study directed toward the two latter questions has been reported by the author in *Computer Automation, Work Environment, and Employee Satisfaction* (in *Industrial and Labor Relations Review*, Ithaca, N.Y., July 1960, pp. 559-567).

<sup>2</sup> The utilization figures were based on a regular one-shift work month.

Fearing that news about the computer installation would have adverse effects upon employee attitudes, the company delayed announcement of the installation until October 1957, and it is unlikely that much information had spread informally through the company before then. At that time, top management made a statement about the impending installation and its purposes, and gave assurances that, in accordance with longstanding company policy, it would not jeopardize any employee's job. No specific guarantee of earnings or of aid in retraining was made. Early in November 1957, all home office employees were called to special information meetings at which technical information was given and questions from employees were answered; however, no specific changeover plans were presented. Personnel whose tasks were to be affected directly by the computer were instructed in the new work procedures during the first week of November. Group meetings in the branch office were not held until April 1958, when that office was to be affected.

The computer installation had a much greater impact on the procedures and tasks of some departments than of others. Home office departments affected extensively, and hereafter called "the computer area," consisted of the IBM key-punching and accounting departments, the programming and office-systems departments, and the internal auditing department. Personnel in this area were given the tasks of computer programming and operation, for which they had to learn new

forms, codes, and sorting and tabulating routines, and devise new procedures for correcting errors. In addition, it was necessary for them to punch many more IBM cards than before. However, conventional IBM equipment also remained in use.

The automobile underwriting department of the home office, the general underwriting department of the branch office, and the coding and policy typing departments of both offices were less extensively affected by the computer installation. Personnel in these departments lost many tasks to the computer, but for many of the remaining tasks, they learned new forms, codes, and procedures. They were given practically no new tasks during the period covered by the study. These departments are called "other affected departments" in this article. The term "affected departments" is used occasionally to refer to the computer area and other affected departments combined.

"Unaffected departments" consisted of the remaining home and branch office departments and accounted for the majority of the work force. The claims adjustment offices, which were unaffected by the installation, were excluded from the study.

From November 1957 to May 1958, the supervisors of the computer area and of other affected departments attempted to defer some procedural changes not related to the computer so that they could concentrate on the conversion to automation. Undoubtedly, however, some unrelated changes occurred. No substantial mechanization or reorganization in unaffected departments took

TABLE 1. CHANGES IN JOB OR WORK CONTENT DURING INSTALLATION PERIOD OF COMPUTER AS PERCEIVED BY EMPLOYEES OF THREE DEPARTMENT GROUPS<sup>1</sup>  
[Percentage distribution]

Changes in job or work content	Job changes attributed to computer <sup>2</sup>				Job changes attributed to any source <sup>3</sup>		
	Computer area	Other affected departments	Unaffected departments	All department groups	Computer area	Other affected departments	Unaffected departments
All responses.....	100	100	100	100	100	100	100
1. Promotion.....	0	0	1	1	0	5	7
2. Transfer.....	4	2	1	2	4	5	5
Remained in job with work content changed—							
3. Greatly.....	52	21	3	12	57	22	6
4. Noticeably.....	13	22	4	10	13	26	13
5. Slightly.....	9	16	10	11	9	26	28
6. Not at all (or no impact).....	22	34	76	60	17	16	39
7. Unknown.....	0	5	5	4	0	0	2

<sup>1</sup> For definition of groups of departments, see text. In November 1957, before the installation of the computer, the computer area had 23 respondents, other affected departments had 62, and unaffected departments had 161.

<sup>2</sup> Responses to following question asked in May 1958 survey: "Did the computer play any part in the change in your job since last November?" The figures in rows 1 through 5 show the proportion of respondents who said the

computer was the main factor or a minor factor in the change they reported. The figures in row 6 refer to those who said either that there had been no change since November or that the computer had had nothing to do with the change.

<sup>3</sup> Responses to following question asked in May 1958 survey: "What has happened to your job since last November?"

place during the period, and the everyday alterations in work methods and tasks were excluded from the study.

Data on employee response to computer automation were collected in two questionnaire surveys conducted in November 1957 and May 1958.<sup>3</sup> More than 90 percent of eligible employees were questioned in each survey.<sup>4</sup> The 246 employees who participated in both surveys were grouped into the computer area, the other affected departments, and the unaffected departments on the basis of their affiliation at the time of the first survey.<sup>5</sup>

The analysis consisted in comparing the responses of the three groups of employees to questions concerning—

1. Perceived changes in work environment (regardless of cause) and feelings about these changes.
2. Perceived impact of the computer upon work environment.
3. General attitudes toward the computer installation.
4. Job satisfaction.

The departmental differences mentioned in the text were all significant at the 5 percent level or better, as determined by the chi-square and other tests.

### Impact of Computer Installation

Almost two-thirds of the employees stated in the May 1958 survey that they had been unaffected by the installation of the computer, and very few thought the computer had brought them promotions or transfers. (See table 1.) The proportion of persons reporting computer impact was highest in the computer area and

lowest in the departments classified as unaffected. Great changes in work were most frequent in the computer area and least common in the unaffected departments.

The employees were asked in the second survey whether the computer had affected each of 14 aspects of their jobs, as listed in table 2. Approximately 20 percent failed to answer the questions or chose the response category "I have no idea." These respondents were primarily from unaffected departments. Among persons giving definite answers, a majority reported no computer impact. The computer was most commonly perceived to have affected variety, amount, and accuracy of work. It was most seldom thought to have affected pay, promotion chances, and amount of supervision. Most effects, except for job security and promotion chances, took the form of increases, such as more variety and greater amount of work.

On the average for the 14 job aspects, the three groups of departments differed noticeably in the frequency and direction of perceived computer impact. In the computer area, 58 percent of those giving definite responses said the computer had an effect, and 96 percent of the effects they reported were increases. This compared with 36 and 71 percent, respectively, in other affected departments and with 15 and 90 percent, respectively, in the unaffected departments.

The computer area and other affected departments did not differ from each other in the frequency of reported impact on job security, promotion chances, and pay, and on accuracy demanded by the job, work variety, and workload. However, the computer area reported more frequent impact upon evaluation of importance of job; amount of supervision; skill, planning, and judgment required; and work interest. Furthermore, it reported more increases than decreases for each of the 14 aspects, but some differences were slight. In the other affected departments, the requirements for accuracy, skill, responsibility, and judgment were raised significantly more often than lowered, while the reverse was true for promotion chances.

After the installation, one-third of the employees thought it very likely or quite likely that

<sup>3</sup> The questionnaire surveys were conducted by the author in cooperation with William A. Faunce, Gloria Cheek, John Nangle, and George Won. The questionnaires employed many of the items used in the study by Jacobson and associates.

<sup>4</sup> Ineligible were company officers, building maintenance employees, employees whose work typically required them to spend more than half the time away from the office, and part-time employees. A total of 283 usable questionnaires were obtained in the first survey, and 295 were received in the second. Further details of the survey procedure and of the identified questionnaires employed are reported by the author and Gerald L. Hershey, *Accuracy of Employee Reports on Changes in Pay* (in *Journal of Applied Psychology*, Washington, August 1960, pp. 269-275).

<sup>5</sup> Only 10 of the respondents moved from one of the three groups to another during the following 6 months, mostly from unaffected to other affected departments of the branch office.

TABLE 2. CHANGES IN 14 JOB ASPECTS DURING COMPUTER INSTALLATION PERIOD AS PERCEIVED BY EMPLOYEES OF THREE DEPARTMENT GROUPS

[Percentage distribution]

Job aspect	Department group <sup>1</sup>	Changes attributed to computer <sup>2</sup>					Changes attributed to any source <sup>3</sup>				
		Total	Increased	None	Decreased	Not available	Total	Increased	Same	Decreased	Not available
1. The amount of variety in my work.	Computer area.....	100	74	26	0	0	100	65	35	0	0
	Other affected departments.....	100	37	37	20	6	100	42	39	19	0
	Unaffected departments.....	100	17	55	2	26	100	46	50	3	1
2. The amount of work required on my job.	Computer area.....	100	74	22	4	0	100	70	30	0	0
	Other affected departments.....	100	39	34	24	3	100	42	45	11	2
	Unaffected departments.....	100	19	53	2	26	100	52	42	4	2
3. The degree of accuracy demanded by my job.	Computer area.....	100	65	35	0	0	100	57	43	0	0
	Other affected departments.....	100	56	37	5	2	100	35	63	2	0
	Unaffected departments.....	100	12	63	0	25	100	27	72	0	1
4. My control over the pace of my work.	Computer area.....	100	48	43	9	0	100	35	56	9	0
	Other affected departments.....	100	21	64	10	5	100	30	60	8	2
	Unaffected departments.....	100	9	63	2	26	100	23	67	6	2
5. The importance of my job for the company.	Computer area.....	100	57	39	0	4	100	52	48	0	0
	Other affected departments.....	100	21	65	8	6	100	27	65	8	0
	Unaffected departments.....	100	5	68	0	27	100	25	73	1	1
6. The amount of supervision I get on my job.	Computer area.....	100	48	48	4	0	100	26	70	4	0
	Other affected departments.....	100	5	87	6	2	100	11	78	11	0
	Unaffected departments.....	100	4	68	2	26	100	12	76	11	1
7. The amount of skill needed on my job.	Computer area.....	100	74	26	0	0	100	52	48	0	0
	Other affected departments.....	100	34	61	3	2	100	37	58	5	0
	Unaffected departments.....	100	9	66	0	25	100	30	67	1	2
8. The amount of responsibility demanded by my job.	Computer area.....	100	70	30	0	0	100	61	39	0	0
	Other affected departments.....	100	39	55	3	3	100	40	52	6	2
	Unaffected departments.....	100	12	65	0	23	100	41	57	0	2
9. The amount of planning I have to do on my job.	Computer area.....	100	61	39	0	0	100	39	61	0	0
	Other affected departments.....	100	11	78	6	5	100	31	63	6	0
	Unaffected departments.....	100	11	62	0	27	100	34	62	2	2
10. The amount of judgment I have to use on my job.	Computer area.....	100	70	30	0	0	100	56	44	0	0
	Other affected departments.....	100	24	68	3	5	100	36	58	6	0
	Unaffected departments.....	100	11	65	0	24	100	40	57	1	2
11. The degree to which my work is interesting.	Computer area.....	100	65	31	4	0	100	61	35	4	0
	Other affected departments.....	100	24	60	13	3	100	42	43	15	0
	Unaffected departments.....	100	14	62	1	23	100	36	50	4	1
12. The amount of security I feel on my job.	Computer area.....	100	31	65	4	0	100	31	65	4	0
	Other affected departments.....	100	11	66	20	3	100	26	55	17	2
	Unaffected departments.....	100	6	67	3	24	100	21	72	4	3
13. My chances for promotion to a better job.	Computer area.....	100	22	74	4	0	100	22	78	0	0
	Other affected departments.....	100	5	68	17	10	100	8	68	22	2
	Unaffected departments.....	100	3	66	2	29	100	15	72	9	4
14. The amount of pay I get on my job.	Computer area.....	100	30	70	0	0	100	56	40	0	4
	Other affected departments.....	100	10	77	2	11	100	39	61	0	0
	Unaffected departments.....	100	6	68	1	25	100	46	53	0	1

<sup>1</sup> For definition of groups of departments, see text. For size of department groups, see footnote 1, table 1.

<sup>2</sup> Employees were asked in the May 1958 survey to check one of the following: "For this aspect of my job, the computer caused (1) a great increase, (2) some increase, (3) no change, (4) some decrease, (5) a great decrease, (6) I have no idea what the computer may have done." The table column heads "Increased," "None," "Decreased," and "Not available" correspond to responses 1-2, 3, 4-5, and 6 plus no response, respectively.

<sup>3</sup> Employees were asked in the May 1958 survey to check one of the following: "How has this aspect of your job changed in the past 6 months? 1. Much more now, 2. More now, 3. No change, 4. Less now, and 5. Much less now." The table column heads "Increased," "Same," "Decreased," and "Not available" correspond to responses 1-2, 3, 4-5, and no response, respectively.



the computer would influence their jobs in the following year or two. People in the computer area were most convinced of this (83 percent), followed by those in other affected departments (61 percent), while a minority of employees in so far unaffected departments thought they would be affected (21 percent).

Fifty-eight percent of the employees who saw the computer as a major or minor factor in the change of job or of work content over the 6-month period said they liked the change, while 21 percent expressed indifference, and an equal proportion said they disliked the change. Among those who thought computer impact on their jobs in the subsequent year or two was very likely or quite likely, 10 percent disliked the prospect, while 29 percent did not care, and 58 percent liked it. Both past and prospective computer impacts were liked more strongly in the computer area and unaffected departments than in the other affected departments.

No questions were asked about employee feelings concerning the impact of the computer upon specific job aspects. Since responses to other questions indicated that the employees usually preferred increases in a job aspect to decreases, the computer impact on specific job aspects was apparently more often liked than disliked.

Sixty-one percent of the employees in both the computer area and other affected departments felt that the changeover to the new computer had been only slightly disrupting or not disrupting at all, while 20 percent saw it as quite disrupting, and 9 percent felt it had been very disrupting. More than one-third of employees in unaffected departments had no opinion.

According to answers given before the installation of the computer, the vast majority of the employees either liked the fact the company had decided to install a computer or were indifferent. Dislike of the decision was reported by 5 percent, indifference by 27 percent, and positive approval by 63 percent. Disapproval was absent from the computer area and most common, 13 percent, in the other affected departments. Table 3 shows that the majority of the employees continued to like the computer installation after they acquired

some experience with it and its effects. Forty-one percent of the employees in affected departments changed their feelings about the computer from November to May, with increases and decreases in liking being equally numerous. In the unaffected departments, 54 percent changed their minds, primarily from positive feelings to indifference.

Answers to other questions also failed to show negative attitudes toward the computer after the installation. The personnel of unaffected departments often did not know whether the computer had been a good thing or a bad thing for employees. However, regardless of department affiliation, those who had an opinion usually thought the computer had been a good thing. A majority of those with an opinion favored wider use of the computer; this feeling was particularly pronounced in the computer area.

### Impact of All Job Changes

In the May 1958 survey, about two-thirds of all participating employees reported that job changes—most commonly, changes in work content without promotion or transfer—had taken place since the computer installation for a variety of reasons. Changes were reported more often by employees in the computer area and in other affected departments than by employees in unaffected departments, and great and noticeable changes in work content were more predominant among the first two groups, particularly in the computer area. Sixty-one percent liked the changes experienced during the 6-month period, 18 percent disliked them, and most of the others professed indifference. Likes and dislikes of the changes were distributed very similarly in the three departments.

In the second survey, the employees were also asked what changes, regardless of source, they experienced in each of the 14 job aspects over the 6 months. In all departments combined, the net change in job aspects was most frequent for variety and amount of work and was least frequent for amount of supervision and promotion chances. Increases significantly outnumbered decreases for

TABLE 3. GENERAL ATTITUDES TOWARD THE COMPUTER AFTER INSTALLATION, BY EMPLOYEES IN THREE DEPARTMENT GROUPS<sup>1</sup>

[Percentage distribution]

General feeling toward computer installation <sup>2</sup>				Computer good or bad for employees <sup>3</sup>				Desirable extent of computer use <sup>4</sup>			
Response	Computer area	Other affected departments	Unaffected departments	Response	Computer area	Other affected departments	Unaffected departments	Response	Computer area	Other affected departments	Unaffected departments
All responses.....	100	100	100	All responses.....	100	100	100	All responses....	100	100	100
I like it very much....	48	18	11	A very good thing....	44	31	15	Much more widely than now.	30	13	9
I like it.....	39	45	28	A good thing.....	44	40	36	More widely than now.	44	34	20
It makes no difference to me.	9	27	50	Neither a good thing, nor a bad thing.	12	13	10	About the same as now.	9	21	20
I dislike it.....	0	8	7	A bad thing.....	0	0	4	Less widely than now.	0	0	1
I dislike it very much..	0	2	0	A very bad thing....	0	0	1	Much less widely than now.	4	0	1
I have never given it a thought.	0	0	2	I have no idea.....	0	13	30	I don't know....	13	30	42
No response.....	4	0	2	No response.....	0	3	4	No response.....	0	2	7

<sup>1</sup> For definition of groups of departments, see text. For size of department groups, see footnote 1, table 1.

<sup>2</sup> The question, asked in the May 1958 survey, was as follows: "What is your general feeling about the fact that the company has installed a computer?"

<sup>3</sup> The question, asked in the May 1958 survey, was as follows: "Considering everything, do you think the computer has been a good thing or a bad thing for the employees in [the company]?"

<sup>4</sup> The question, asked in the May 1958 survey, was as follows: "In your opinion, would it be a good idea to use the computer more widely or less widely in this company than is now the case?"

all aspects except amount of supervision and promotion chances. For most aspects, however, a majority reported there was no change during the period.

Employees in unaffected departments tended to report less net change in job aspects than did employees in the computer area or the other affected departments. However, the differences were very small for many of the individual job aspects. The computer area and other affected departments combined reported significantly more change in accuracy requirements, importance of job, work interest, and job security than did unaffected departments.

The three groups also differed somewhat in the direction of the change in job that was reported. In general, the number of increases relative to that of decreases tended to be higher in the computer area and in unaffected departments than in the other affected departments. This relationship was statistically significant for variety and amount of work, importance of the job to the company, responsibility required, work interest, job security, and promotion chances. The computer area did not differ from unaffected departments in the direction of change on any of the job aspects. Even in the other affected departments,

increases exceeded decreases for most aspects, but decreases in promotion chances were reported significantly more often than were increases.

Most net changes in job aspects were in a direction employees liked. Among those who reported a change in any job aspect after the computer installation, from 61 to 93 percent said they liked the change or liked it very much, up to 10 percent reported indifference, and from 2 to 31 percent disliked it or disliked it very much. Indifference was expressed most often toward changes in amounts of work and supervision and least often toward changes in work interest and job security. Likes were most numerous relative to dislikes in the case of accuracy, skill, and responsibility and fewest in the case of promotion chances, amount of supervision, and job security.

Considering the 14 job aspects together, responses stating that changes were liked outnumbered the expressions of dislikes by 10 to 1 in the computer area and in unaffected departments, but only by 3 to 1 in the other affected departments. In the last group, the changes in importance of the job, amount of supervision received, amount of judgment required, job security, and chances for promotion were disliked as often as they were

liked. However, no aspect was significantly more disliked than liked even in these departments. In the computer area, the changes in 11 of the aspects were liked more often than disliked, but changes in pay, which were all increases, were disliked as often as they were liked. Employees in the computer area perceived few changes in job security and chances for promotion, and the number of likes and dislikes for these two changes did not differ significantly.

As suggested by the responses to pay changes in the computer area, some changes were perhaps reported as disliked, not because they went in the undesired direction or disrupted the status quo, but because they did not go far enough in the desired direction. Similarly, some expressions of approval possibly meant that although the change was really undesirable, it was too small to disturb materially a pleasant status quo.

### Department Differences in Job Satisfaction

The same 24 questions concerning job satisfaction were asked in each survey. Since the questionnaires were identified, it was possible to determine whether each respondent's reported satisfaction in each of these 24 respects had risen, remained the same, or fallen from the first to the second survey. As an average for all departments and items, 33 percent of the 246 respondents showed increased satisfaction, 39 percent showed no change, 24 percent showed decreased satisfaction, and 4 percent did not answer.<sup>7</sup> Because of response unreliability, however, these figures somewhat overstate the frequency of genuine change.

Absence of change was equally common for all 24 items. Increases in job satisfaction were significantly more numerous than decreases for 15 items. These included all of the items listed in table 2 (excepting promotion opportunities), and items described as "the relationship between you and your supervisor" and "the information you receive concerning changes in the company and in your job." In addition to promotion opportunities, other exceptions were the way changes were handled, kind of work done, the company, amount of information, accuracy of information, understandability of information, promptness

of information, and the job as a whole. But for no item were decreases in satisfaction significantly more common than increases.

The preponderance of increases over decreases in satisfaction was probably not related to the computer, and there were no other large changes in company behavior that would easily explain the net increases in satisfaction. More plausible explanations lie in the continuation of the 1957-58 recession (affecting heavily the automobile industry of the region and making the insurance company employees happier about their jobs), and in a variety of special factors.

The three groups of departments showed few pronounced differences in the frequency and direction of change in job satisfaction. In fact, significant differences were found for only 3 of the 24 items. Satisfaction with pay changed equally often in the three groups, but the computer area showed fewer increases relative to decreases than did the other two groups. Satisfaction with the promptness of information changed less often in the other affected departments, but increases were equally common relative to decreases in all groups. Increases were more predominant among changes in overall job satisfaction in the unaffected departments.

Nevertheless, there were signs of a pattern of differences. For the first 12 items on table 2, the average frequency of change was lower in unaffected departments than in the other two groups, while the ratio of increases to decreases was smallest in the other affected departments. For the remaining 11 of the 23 specific job aspect items, the average frequency of change did not differ among departments, but the proportion of increases in satisfaction was lower in the computer area than in the other two groups. The first set of items covered primarily intrinsic job aspects, while the second set covered pay, job tenure, relations to management, and information.

According to the second survey in May 1958, employees as a group showed little satisfaction with chances for promotion, amount of pay received, the way of handling changes in the company, and the promptness of information. They were notably satisfied, however, with accuracy and skill requirements and responsibility.

The three department groups differed little in satisfaction with individual job aspects after the computer installation. Complete satisfaction

<sup>7</sup> Because of its bulk, the table showing the changes in job satisfaction and the May 1958 level of satisfaction by aspect and department was omitted from the article. Interested readers may obtain copies of the table from the author.

with amount of supervision and skill was most pronounced in the computer area. The largest proportion of respondents "somewhat satisfied" or "not satisfied" with variety and with kind of work done was found in other affected departments. For all other job satisfaction items taken individually, including overall satisfaction, there were no significant departmental differences, whether the comparisons pertained to the proportion of completely satisfied respondents or to the proportion of respondents that were somewhat or not satisfied.

On the average for the 24 items, however, complete satisfaction was most commonly reported in the computer area, while the other affected departments showed the largest proportion of somewhat or not satisfied respondents. The department differences in average proportions of completely satisfied and somewhat or not satisfied respondents were about the same for the first 12 items as the latter group; the only significant variation was that the computer area was less often dissatisfied and the other affected departments were more often dissatisfied with the first set of items than with the second.

### Conclusions

The results of the study indicate that the installation of the computer by the insurance company affected the work environment of a number of employees in several respects, that most of its effects were those that employees desired, and that the computer installation was liked more often than disliked. However, the departments affected by the computer and those not affected differed little in the frequency and direction of net change in most job aspects although there were significant department differences for some aspects of the job. Employees in the computer area (which gained work tasks as a result of the

installation) and employees of the unaffected departments liked the net changes more than did employees of the other affected departments (which had lost work tasks because of the computer and had been required to adjust to partly new methods of work). The employees of these other affected departments showed less gain in satisfaction with intrinsic job aspects than did the personnel of the other two groups. Computer area personnel tended to become comparatively less satisfied than other employees with job tenure, pay, relations to supervisor and company, and information practices. Most department differences in job satisfaction change were slight.

Except for the installation of the computer and the resulting adaptation of work methods, there were no large technological changes in the company during the period studied. The fact that affected departments and unaffected departments were found to differ little in perceived job changes, in feelings about these changes, and in changes in job satisfaction indicate that the computer had only moderate effects upon work environment and job satisfaction. This conclusion, which agrees with the author's conclusion from a previous study of computer automation,<sup>8</sup> suggests that the installation of an IBM 650 computer is not a radical or extensive enough operation to cause a substantial reversal or acceleration of existing trends in work environment and job satisfaction. The computer area's slightly declining satisfaction with information practices and with the company's way of handling changes suggests, however, that the process of installing a computer and of adapting work methods to it may cause noticeable, though presumably temporary, dissatisfaction unless management handles the conversion with great skill.

<sup>8</sup> See *Computer Automation, Work Environment, and Employee Satisfaction* (in *Industrial and Labor Relations Review*, Ithaca, N.Y., July 1960, pp. 550-567).



# Summaries of Studies and Reports

## Office Automation in the Federal Government

BECAUSE the Government has a large volume of routine recordkeeping, Federal administrators and technicians have been greatly interested in the economies of personnel, time, and money possible with electronic data processing. From the earliest stages of development of this new technology, Federal agencies have been among the leaders in adopting electronic computers for business as well as scientific purposes. These innovations represent the latest step in a continuing search for more efficient equipment going back as early as 1889, when Herman Hollerith of the Census Bureau pioneered the use of mechanical data processing equipment.

The impact of office automation on Government employees has also been receiving special attention. The Subcommittee on Census and Government Statistics of the House of Representatives Committee on Post Office and Civil Service conducted hearings in 1959 and 1960 to determine the extent of office automation in the Federal Government and to explore the implications of these technological changes for Federal clerical workers. The subcommittee, under the chairmanship of Representative John Lesinski of Michigan, heard witnesses from the Bureau of the Budget, the General Accounting Office, the Veterans Administration, the Treasury and Post Office Departments, and several Government employee unions. In addition to the testimony by the witnesses, many exhibits were also submitted to the subcommittee.

This article summarizes material presented in these hearings concerning the impact of office automation on employees (primarily clerical). It presents information on such topics as computer applications and savings, problems of displacement and reassignment, personnel planning for technological change, selecting and training per-

sonnel for electronic data processing (EDP) positions, and attitudes of employee organizations toward automation.<sup>1</sup>

### Extent and Examples of Use

Since the Bureau of the Census first introduced a large-scale electronic computer for business purposes in 1951, the application of EDP systems has grown rapidly. According to a recent Bureau of the Budget survey, there were 414 computers of all sizes located in Government agencies in fiscal year 1959.<sup>2</sup> An earlier report, included in the hearings, noted that 8 out of 10 of all medium- and large-scale computers were located in military establishments, and that 2 out of 3 were programmed for business applications, the remainder being used to process scientific data.<sup>3</sup> The rapid growth of electronic data processing in Government agencies will probably continue. By 1961, agencies informed the Budget Bureau that they expect to have 646 computers in operation.

Among examples of computer uses described in the hearings are two business applications in the Treasury Department that involve hundreds of millions of transactions annually: the payment and reconciliation of Treasury checks and the auditing and accounting of U.S. savings bonds.

<sup>1</sup> The article is based on the following two volumes: *Use of Electronic Data-Processing Equipment*, Hearings Before the Subcommittee on Census and Government Statistics of the Committee on Post Office and Civil Service (86th Cong., 1st sess.), Washington, 1959; and *Office Automation and Employee Job Security*, Hearings Before the Subcommittee on Census and Government Statistics of the Committee on Post Office and Civil Service (86th Cong., 2d sess.), Washington, 1960.

For information on topics considered in this article as they would apply to offices in private industry, see *Adjustments to the Introduction of Office Automation*, BLS Bull. 1276 (1960), and a summary thereof in the April 1960 Monthly Labor Review, pp. 376-390.

<sup>2</sup> See *Inventory and Cost Data Concerning the Utilization of Automatic Data Processing (ADP) Equipment in the Federal Government for Fiscal Years 1959, 1960 and 1961*, Executive Office of the President, Bureau of the Budget, May 1960. This report, to be prepared annually, was not included in the hearings.

<sup>3</sup> This report on manpower problems related to adoption and use of EDP systems was prepared by a private research organization for the Bureau of the Budget's Interagency Committee on Automatic Data Processing. The function of this committee is to coordinate the activities of various users of EDP equipment and to act as a clearinghouse for disseminating information on developments in electronic data processing.

In the Veterans Administration, a large-scale electronic data processing system will be used to establish and maintain insurance records for over 6 million policyholders. Officials claim that this operation will be "the most extensive computer application undertaken by any major life insurance operation." This program will eventually draw the premium, loan, dividend, and billing records into one major file. The system will then be used to perform high-speed posting, billing, and accounting operations, and will store a complete, up-to-date record on a magnetic tape, which will constitute the master record file.

### Some Economic Effects

A striking, though not necessarily typical, case of substantial direct savings achieved through the use of electronic data processing systems is the Treasury's check payment and reconciliation operation. Transferring this function to computers centralized in the Treasury Department the responsibility for an operation that had previously been performed jointly by the Treasury Department, the General Accounting Office, and certain Federal Reserve banks.

Table 1 shows the amount of direct savings. Although the workload increased 14 percent, employment declined 48 percent—with the result that output per employee more than doubled (up

TABLE 1. COMPARISONS OF PRODUCTIVITY AND UNIT COSTS OF GOVERNMENT CHECK SYSTEMS, BEFORE AND AFTER THE INTRODUCTION OF AN ELECTRONIC DATA PROCESSING SYSTEM

Item	Before EDP (fiscal year 1956)	After EDP (fiscal year 1959)	Percent change
Workload.....checks.....	345,000,000	393,000,000	+13.9
Number of operating employees.....	1,502	803	-46.3
Total cost.....	\$7,188,000	\$5,569,000	-22.5
Labor cost (including retirement and other fringe costs).....	6,101,000	3,891,000	-36.2
Equipment rentals.....	579,000	1,222,000	+111.1
Other costs <sup>1</sup> .....	508,000	456,000	-10.2
	Indexes (1956=100)		
Output per employee.....	100.0	220.2	+120.2
Employees per unit of output.....	100.0	45.4	-54.6
Cost per unit of output.....	100.0	68.0	-32.0
Labor cost per unit.....	100.0	58.0	-42.0
Equipment rental per unit.....	100.0	185.3	+85.3
Other costs per unit.....	100.0	78.8	-21.2

<sup>1</sup> Includes a 10-percent pay increase granted classified workers in 1958.

<sup>2</sup> Includes costs for shipping and communications, forms and supplies, and indirect costs.

SOURCE: Derived from data presented in Office Automation and Employee Job Security, op. cit., pp. 76-77.

120 percent). Unit labor costs declined 44 percent, while equipment rental per unit of output rose 85 percent; total unit costs declined 32 percent.

Indirect operating economies should greatly increase with the improvement of management control techniques which would result from the centralization and consolidation of data for EDP operations and from the preparation of more meaningful and timely reports. For example, a GAO report (included in the hearings) stated that numerous electronic systems are currently applied in Defense Department supply operations in which the Government has over \$50 billion in inventories. Even small percentage savings achieved through a reduction in inventory levels could yield substantial annual savings. The report states: "The unique ability of electronic systems to rapidly combine and analyze data regarding resources and needs in integrated systems in these programs holds promise of achieving these savings."

### Displacement and Reassignment

In the hearings, various Treasury officials described the impact on employees that resulted from the use of computers to process check payment and reconciliation and to perform savings bonds auditing and accounting operations.<sup>4</sup>

The changeover relating to check payment and reconciliation affected employees in three agencies: the Office of the Treasurer, the General Accounting Office, and the Federal Reserve System. The electronic system went into operation in June 1957 after a 17-month phased conversion from a mechanical system. Table 2 shows the changes effected from June 1956 to June 1959 (data were not presented for the Federal Reserve System).

Only 174, or 23 percent, of the 755 persons affected were retained in the same unit for continuing operations. Over one-half were transferred, most going to other activities within their organization; only 31 employees, 4 percent of the total, went into the new unit. Through special placement efforts, about 11 percent went to other agencies. Nearly 14 percent resigned or retired. Two were laid off.

<sup>4</sup> Data on characteristics (age, sex, education, etc.) of affected employees and those selected for electronic data processing, extent of their upgrading or downgrading, and their subsequent work assignments were not reported in these hearings.

TABLE 2. REDUCTIONS IN EMPLOYMENT IN AFFECTED UNITS IN THE OFFICE OF THE TREASURER AND THE GENERAL ACCOUNTING OFFICE, JUNE 1956 TO JUNE 1959

Personnel actions	Number	Percent
Total personnel as of June 1956.....	755	100.0
Retained for continuing operations.....	174	23.0
Temporarily retained <sup>1</sup> .....	70	9.3
Transferred.....	399	52.8
To new EDP system in the Office of the Treasurer or the General Accounting Office.....	31	4.1
To other activities within the Office of the Treasurer or the General Accounting Office.....	244	32.3
To other Treasury bureaus.....	44	5.8
To other Government agencies.....	80	10.6
Resigned, retired.....	104	13.6
Deceased.....	6	.8
Laid off.....	2	.3

<sup>1</sup> In order to complete residual operations in GAO under old system. Of these 70 employees, 59 were subsequently assigned other duties within the GAO, 2 were transferred to other agencies, 4 resigned or retired, and 5 were laid off.

SOURCE: Office Automation and Employee Job Security, op.cit., p. 75.

Automation of the auditing and accounting of savings bonds in the Treasury Department had a more unfavorable outcome for employees. Despite serious efforts, it was difficult in this case to find other jobs for these workers because a large number were clerical employees whose skills were not in demand and who did not want to relocate in other cities.

The introduction of the computer affected 889 people in the Bureau of Public Debt and caused the closing of audit branches in Chicago and New York and the curtailment of operations in the Chicago departmental office. Electronic data processing of punchcard savings bonds was started at a new office in Parkersburg, W. Va. (at that time classified a labor surplus area). Other bond processing operations were transferred to the Cincinnati branch.

Personnel changes were extensive. (See table 3.) Of 889 employees, over one-third, mainly in lower clerical grades, were laid off. Sixteen percent resigned, giving such reasons as ill health, home responsibilities, and the desire for further education. Three percent were transferred to other Public Debt offices; 35 percent went to other Government agencies. Nine percent of the total personnel, all from the Chicago departmental office, obtained jobs with private industry.

Bureau officials reported that few of those in Chicago and New York whose jobs were eliminated were willing to move to Parkersburg when offered jobs there. The 458 employees required in the Parkersburg installation were recruited locally. And Bureau officials trying to locate other jobs for those displaced found that there was little

demand for people doing such routine clerical work as alphabetical filing and keypunch card work.

### Planning for the Change

Federal officials made advance efforts to cushion the impact of office automation on employees. It was reported that agencies adopted such policies as sharing information with employees concerning technological change, using attrition to minimize layoffs, transferring employees to other positions, and retraining employees for reassignment to new jobs.

The Treasury Department adopted a policy of informing employees of changes well in advance. In the Office of the Treasurer and in the Bureau of Accounts (affected by another installation), employees were informed nearly a year before scheduled conversion dates. Ivy Baker Priest, the Treasurer of the United States, met with employees of the Office of the Treasurer to assure them that everything possible would be done to alleviate hardships that might arise. In the Bureau of Accounts, a memorandum was sent to regional offices setting forth the probable effects impending operational changes would have on employee job security. This memorandum was supplemented by visits of agency officials to each of the six regional offices scheduled to be closed. During these field visits, the officials discussed personal employment problems with the individuals who would be affected by the changeover.

In the Veterans Administration, providing employees with advance and periodic information concerning technological change is an integral part

TABLE 3. REDUCTIONS IN EMPLOYMENT AT THE NEW YORK AND CHICAGO OFFICES OF THE BUREAU OF PUBLIC DEBT, MARCH 19, 1957, TO JUNE 30, 1958<sup>1</sup>

Personnel actions	Number	Percent
Total affected.....	889	100.0
Transferred.....	336	37.8
To other Public Debt offices.....	25	2.8
To other Government agencies.....	311	35.0
Obtained jobs with private industry (Chicago office).....	78	8.8
Resigned because of ill health, home responsibilities, desire to further education, etc.....	143	16.1
Retired.....	14	1.6
Laid off.....	318	35.8

<sup>1</sup> No layoffs have been necessary since June 30, 1958, and none are foreseen.

NOTE: Because of rounding, the sum of individual percentages does not equal 100.

SOURCE: Office Automation and Employee Job Security, op. cit., p. 83.



of basic personnel policies developed for EDP situations. Commenting at the hearings on personnel procedures already initiated, Edward R. Silberman, Assistant Administrator for Personnel, stated: "We wanted our people to know what was going on and how they stood at any given time . . . [and] we wanted to provide a ready access to management."

These personnel policies were spelled out in a letter from Sumner G. Whittier, VA Administrator, to his department and office heads well ahead of the initial computer installation. Subsequent information was provided in periodic newsletters, bulletins, etc., and during conferences held by agency officials with employee groups. Information supplied included a description of electronic data processing, types of jobs and number of employees likely to be affected, and reassurance that the agency would do everything possible to minimize displacement. A basic orientation course on EDP, lasting from 3 to 40 hours, was given to 17,500 employees.

Mr. Whittier instructed department heads to inform managers of the occupational categories and number of employees to be affected at each VA station "as soon as possible, but not later than 6 months prior to the conversion date for the particular station"; and it was also decided that employees adversely affected would be given a minimum of 90 days' advance notice.

Some agencies formulated in advance explicit policies for EDP installations which provide for maximum use of attrition where necessary. A Department of the Army regulation (AR-1-250) specifically states: "Resultant personnel adjustments will be minimized wherever possible through attrition or retraining and reassignment in preference to reduction-in-force procedures." A joint Treasury Department-General Accounting Office report (included in the hearings) noted that the long time period necessary for planning the computer installation provides maximum opportunity to utilize attrition.

In the future, agencies plan to rely heavily on attrition to provide jobs for employees displaced because of automation. The Internal Revenue Service will soon begin to install a centralized data processing system, and Commissioner Dana Latham stated in a letter to IRS employees on August 12, 1959, that "we will make every effort to effect changes gradually so that most,

if not all, of the necessary personnel cuts can be made by attrition."

An integral phase of advance planning was the development of administrative procedures for transferring surplus employees to other jobs. The Treasury Department's Bureau of Accounts (Division of Disbursements), for example, instituted a "job freeze" and instructed that all vacancies be reported to the central personnel office to determine whether employees displaced because of the closing of certain field offices could qualify for the openings. Bureau officials also discussed with other Federal agencies and local civil service offices the placement of these surplus employees.

The VA estimated at the hearings that automation will create 1,259 surplus positions in VA offices throughout the country during fiscal years 1960-62. Commenting on the importance of advance planning, Mr. Silberman stated: "The need for reassignment actions will be anticipated in sufficient time to take full advantage for outplacement of employees." In some instances surplus employees in regional offices will be offered transfers at Government expense to VA hospitals in need of their services.

Providing displaced employees with opportunities to develop skills needed for new jobs was recognized as an important prerequisite to making an orderly change. Some agencies made efforts to provide training programs in advance. The Treasury Department (Office of the Treasurer), for example, offered a refresher course in typing to all affected employees who had some typing skills; employees who could then qualify for typing jobs were placed in these positions as they became available.

### Selecting EDP Personnel

The creation of new jobs and the selection of personnel to fill them presented extensive administrative problems. Table 4 shows the staffing, in 1958, of primary EDP jobs as reported by 236 computer installations. Two-thirds of the employees were engaged in planning and programing activities for computers, one-fourth were digital computer systems (console) operators or peripheral equipment operators, and a small group, only 8 percent, administered the EDP systems.



TABLE 4. NUMBER OF EMPLOYEES IN PRIMARY EDP OCCUPATIONS (AS OF MARCH 31, 1958) AT 236 GOVERNMENT COMPUTER INSTALLATIONS

Primary EDP occupation	Positions filled	
	Number	Percent
All occupations.....	3,742	100.0
Digital computer administrator.....	301	8.0
Digital computer management analyst.....	615	16.4
Digital computer programmer.....	1,773	47.4
Electronic technician.....	83	2.2
Digital computer systems operator.....	621	16.6
Peripheral equipment operator.....	349	9.3

NOTE: Because of rounding, the sum of individual percentages does not equal 100.

SOURCE: Use of Electronic Data-Processing Equipment, op. cit., p. 83.

The agencies' general practice in filling EDP positions was to select employees only from their own staffs. A 1958 survey (see footnote 3) of recruitment practices at 129 military and civilian agencies showed that nearly two-thirds of the agencies filled EDP positions only from their own staffs; one-tenth filled them only from outside sources; and one-fourth used both methods of recruitment.

The reasons cited for preferring to recruit from within were the shorter training time required where the employee knows the paperwork process and the improvement in morale where there are advancement opportunities. At the same time, some reported that they needed to seek employees outside their own agencies because of the shortage of talent among their workers.

Written aptitude and intelligence tests were widely used. Of 129 agencies reporting types of selection methods, 7 out of 10 administered one or more tests, primarily to applicants for programmer and computer operator positions. In addition to various Civil Service examinations, tests designed specifically to show programmer aptitudes were used. In cases where written testing devices were not used, interviews and other formal practices were frequently employed.

The magnitude of the selection task is illustrated by the experiences of the Treasury Department and the General Accounting Office. All the employees working in the units affected by the conversion were invited to take an aptitude test. Of 470 persons tested, 77 were selected for training, and 23 were assigned to electronic positions. Not only aptitude tests, but also supervisors' written evaluations were taken into account. Final selection of the 23 employees who

were to become the regular programmers or operators was made on the additional basis of marks achieved in programming school and the satisfactory performance of programming duties on subsequent detail assignments.

### Training in EDP

Training for EDP operations was a complex task partly because of the various types required. Training was needed not only for the development of programmers and console operators, but also for the orientation and indoctrination of higher levels of management.

A survey for the Bureau of the Budget showed that the Government relied almost exclusively on computer manufacturers for the training of programmers and operators. Several sources were drawn upon to give EDP indoctrination to middle and top management—manufacturers, Government agencies, universities, professional associations, and consultants, etc.

The Government paid salaries and any tuition and transportation cost of trainees. Manufacturers generally provided free classes for programmers and operators from agencies using their equipment.

An illustration of the extensive amount of formal training given is the program at the Philadelphia office of the Department of Insurance of the Veterans Administration, where 2,700 employees were involved. Representatives of computer manufacturers gave on-the-site courses to employees directly involved in computer operations; 20 persons were each given 150 hours of programming; 5 employees, 24 hours of peripheral equipment operation; and 5 persons, 12 hours of digital computer console operation.

In preparation for other clerical jobs created by this EDP installation, several hundred employees and administrators were given classroom training dealing with use of records and documents involved in programming. In addition, all 2,700 employees received orientation courses lasting 1½ hours.

Some agencies gave tests to trainees in order to weed out unsuitable candidates. At one agency, instructors gave periodic tests of material covered, with the result that 25 to 30 percent of the trainees were dropped out. At another agency, 7 percent of the programmer trainees were dropped

on the basis of monthly evaluation reports by supervisors.

### Attitude of Employee Organizations

Officials of Government employees' unions stated that they did not oppose automation, but wanted specific efforts made to avoid hardships arising from EDP installations. Some approved the advance preparations made by the VA, and they felt that similar efforts should be made prior to future technological changes. They suggested a number of specific protective measures.

Vaux Owen, president of the National Federation of Federal Employees, recommended a five-point program:

- (1) Thorough and definite planning ahead . . . of all departments and agencies prior to adoption of automated procedures.
- (2) Retraining programs . . . for all employees before they are displaced by automation so that [they] may be qualified for reassignment to other positions.
- (3) Positive reassignment procedures . . . so that employees can feel some assurance they will get reassignments in their own or another Federal agency. . . .
- (4) Definite placement programs . . . to place in suitable jobs in private industry those who cannot be reassigned in the Federal service.
- (5) Advance information . . . about plans for installing automated procedures, and just which categories of employees, and how many will likely be affected, and when.

Owen also proposed "an inventory of the skills of the people in the different agencies" as well as an inventory "of those who want to develop new skills."

Besides making similar recommendations, George Riley, legislative representative of the

American Federation of Labor and Congress of Industrial Organizations, called for early retirement benefits for untrainable employees affected by automation who have a specified minimum of service and are past a certain age. He also recommended severance pay for employees dismissed.

A number of administrative changes were suggested to carry out these proposals. James K. Langan, operations director of the AFL-CIO Government Employees Council, suggested that "the Congress lay down a policy that would require the agencies to have personnel management work closely with the installation engineers to reduce to a minimum the adverse effect upon employees." Riley recommended "the formation of a central transfer unit with authority to overcome resistance of uncooperative agencies." James Campbell, president of the American Federation of Government Employees, called for a transfer facility in the Civil Service Commission which would serve as a governmentwide clearinghouse for reassigning employees and assisting displaced employees to relocate.

Langan pointed out that Government employees do not have the same facilities for collective bargaining as employees in private industry have, and, consequently, that there is a challenge for the administration and the Congress to develop model personnel practices to handle the problem of automation.

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Division of Productivity  
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## Earnings in the Machinery Industries, 1959-60

AVERAGE STRAIGHT-TIME HOURLY EARNINGS of production workers in the nonelectrical machinery manufacturing industries rose by 4.1 percent during the preceding year in 21 areas surveyed by the Bureau of Labor Statistics during the winter of 1959-60.<sup>1</sup> Detroit, with straight-time average earnings above \$3 an hour for nearly all skilled jobs studied, continued to lead in pay levels for machinery workers among the survey areas. Tool and die makers were the highest paid workers studied in most of the areas.

Establishment provisions for paid holidays, paid vacations, and some form of health insurance have been widespread in the industry in nearly all areas surveyed for a number of years. The main developments in the past few years have been in the liberalization of provisions in existing plans, and the adoption of additional types of insurance.

### Industry Characteristics

Machinery (nonelectrical) manufacturing, as defined for purposes of this study, includes a group of metalworking industries which manufacture products ranging from relatively simple devices to highly complex machinery and equipment.

A wide variety of nonelectrical machinery was manufactured in each of the 21 areas studied. However, in a number of areas, a substantial proportion of workers, although rarely a majority, were engaged in producing machinery items in one or another major product grouping. For example, in Milwaukee, a substantial proportion of machinery industry employees produced farm machinery and equipment; in Dallas and Houston, many workers were engaged in the manufacture of oilfield machinery and equipment; in Cleveland, Detroit, Pittsburgh, and Worcester, the metalworking machinery industry employed a substantial proportion of workers; and in Baltimore, machine shops (jobbing and repair) engaged the services of many workers. The manufacture of machinery items for general industrial use also accounted for a sizable proportion of employment in many areas.

Levels of total industry employment differed considerably among the labor markets selected

for study. At the time of the survey, fewer than 10,000 workers were employed in each of five areas—Baltimore, Dallas, Denver, Portland (Oreg.), and Worcester; between 10,000 and 25,000 in each of eight—Boston, Buffalo, Houston, Minneapolis-St. Paul, New York City, Pittsburgh, St. Louis, and San Francisco-Oakland; between 25,000 and 50,000 in Cleveland, Hartford, Los Angeles-Long Beach, Newark and Jersey City, and Philadelphia; and more than 50,000 in Chicago, Detroit, and Milwaukee.

Employing units ranged in size from jobbing shops with only a few workers to establishments with more than 2,500 employees. Establishments in the latter group were found in 11 of the areas studied, although Hartford, Milwaukee, and Philadelphia were the only areas in which as many as two-fifths of the workers were employed in establishments of this size. In contrast, a majority of the workers in Denver, New York City, Portland, and San Francisco-Oakland were employed in establishments with fewer than 250 workers.

In the 21 areas combined, nearly three-fourths of the production employees were in establishments having labor-management contracts covering a majority of their workers. By area, contract coverage ranged from virtually all of the production workers in San Francisco-Oakland to fewer than half in Baltimore, Dallas, and Los Angeles-Long Beach.

A majority of the production workers in each of the 21 areas surveyed were paid on an hourly rate basis. The proportions ranged from approximately three-fifths in Hartford and Worcester to more than nine-tenths in Dallas, Detroit, Houston, and the three West Coast cities.

### Trends in Earnings

Average hourly earnings of production workers, exclusive of premium pay for overtime and for work on weekends, holidays, and late shifts, in the 21 areas surveyed rose 4.1 percent between

<sup>1</sup> The BLS survey included establishments primarily engaged in manufacturing machinery, except electrical, as defined in the 1957 edition of the Standard Industrial Classification Manual (Industry Group 35) prepared by the U.S. Bureau of the Budget. Omitted from the survey were (1) establishments employing fewer than 8 workers and primarily engaged in producing special dies and tools, die sets, jigs, fixtures, machine tool accessories, and measuring devices, and (2) other nonelectrical machinery establishments employing fewer than 20 workers. Detailed results of the study will be published in forthcoming BLS Report 170. For areas covered and month concerned, see footnote 2, table 2.

TABLE 1. INDEXES<sup>1</sup> OF AVERAGE STRAIGHT-TIME HOURLY EARNINGS<sup>2</sup> OF PRODUCTION WORKERS IN MACHINERY MANUFACTURING IN SELECTED AREAS AND OCCUPATIONS, JANUARY 1959 AND JANUARY 1960, AND PERCENT INCREASES FOR SELECTED PERIODS<sup>3</sup>

Area and occupation	Indexes (1947-49=100)		Percent increases from—			
	Jan. 1960	Jan. 1959	Jan. 1959 to Jan. 1960	Jan. 1958 to Jan. 1959	Jan. 1956 to Jan. 1958	Jan. 1945 to Jan. 1960
<b>AREA</b>						
All areas combined <sup>4</sup> .....	168.6	162.0	4.1	3.3	10.2	135.2
Baltimore.....	174.2	169.5	2.8	6.1	10.6	140.7
Boston.....	164.8	156.8	5.1	4.6	9.7	138.8
Buffalo.....	160.3	163.7	3.4	2.7	11.5	123.2
Chicago.....	167.5	160.6	4.3	3.8	9.0	140.0
Cleveland.....	164.2	153.7	6.8	2.1	9.5	124.7
Dallas.....	157.8	153.2	3.0	3.5	9.5	103.7
Detroit.....	168.4	161.7	4.1	2.3	11.6	116.6
Hartford.....	170.8	163.1	4.7	3.1	11.3	139.0
Houston.....	169.6	157.9	7.4	.9	11.6	129.4
Los Angeles-Long Beach.....	166.2	159.9	4.0	2.5	10.8	116.1
Milwaukee.....	173.2	166.7	3.9	3.3	11.4	155.5
Minneapolis-St. Paul.....	166.4	160.2	3.9	2.7	8.9	132.3
Newark and Jersey City.....	160.0	157.7	1.4	4.4	8.7	118.0
New York City.....	156.8	152.3	2.9	1.3	8.7	121.6
Philadelphia.....	170.2	163.4	4.2	5.3	7.1	138.9
Pittsburgh.....	183.0	178.0	2.8	5.5	11.7	163.1
St. Louis.....	175.4	169.1	3.7	3.5	9.8	159.2
San Francisco-Oakland.....	176.1	171.7	2.5	8.5	18.5	130.2
<b>OCCUPATION</b>						
Laborers, material handling.....	177.8	172.0	3.4	4.7	12.6	159.3
Tool and die makers (other than jobbing).....	164.9	158.8	3.9	4.1	9.8	118.9

<sup>1</sup> For the methodology used in constructing the indexes, see Wage Trends in Machinery Manufacturing, 1945-51 (in Monthly Labor Review, January 1952, footnote 1, p. 48). Beginning with the indexes for January 1953, constant weights, based on average employment for 1953 and 1954, were used.

<sup>2</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>3</sup> Data for January 1960 cover periods ranging from December 1959 to May 1960; see footnote 2, table 2. Similarly, data for other selected dates cover various periods of the winter.

<sup>4</sup> Includes data for 3 areas (Denver, Portland (Oreg.), and Worcester) not shown separately.

January 1959 and January 1960. Earnings in 1958 rose 3.3 percent and between 1956 and 1958, 10.2 percent. (See table 1.)

Individual area increases in average hourly pay levels between 1959 and 1960 ranged from 1.4 percent in Newark and Jersey City to 7.4 percent in Houston. In a majority of the 21 areas, the increases were between 2.5 and 4.5 percent. Variations in wage movements among areas may be partly attributable to the timing and frequency of wage negotiations among establishments in the areas. For example, Houston had the largest increase (7.4 percent) for the latest survey period and the smallest increase (0.9 percent) between 1958 and 1959.

General wage changes usually account for most of the year-to-year movement in earnings; however, other factors, such as labor turnover and changes in employment in establishments with different pay levels, also affect the trend in wages.

Thus, during a period of declining economic activity, an increase in the overall level of wages may reflect a reduction in the proportion of workers with the least seniority and the lowest level of earnings, rather than any adjustment in individual rates.

The extent of wage movement varied not only among areas but also between the skilled and unskilled occupations included in the study. For the 21 areas combined, straight-time hourly earnings of tool and die makers (other than jobbing) rose 3.9 percent, or about 11 cents an hour, during 1959, while earnings of material handling laborers rose 3.4 percent, or about 7 cents. The greater percentage increase in earnings of tool and die makers is a reversal of a long-term trend which has narrowed the differentials in pay levels between these two groups. Since 1945, when the first occupational wage relationship study of the machinery industries was conducted, there has been a substantial reduction in the percentage differentials between the wages of skilled and unskilled workers. Average earnings of material handling laborers have increased since January 1945 by 159.3 percent, compared with an increase of 118.9 percent for tool and die makers. Most of the narrowing occurred between 1945 and 1953, largely because of cents-per-hour increases granted "across the board." Average hourly earnings of workers in both job classifications have increased about 25 percent during the past 5 years. Twice during this period, in the survey years 1956 and 1960, a larger annual increase was recorded for tool and die makers than for laborers.

#### Levels of Earnings, Winter 1959-60

Average straight-time hourly earnings for approximately one-fourth of the men's occupations selected for study were highest in Detroit among the 21 areas surveyed between December 1959 and May 1960 (table 2). Milwaukee, Pittsburgh, and San Francisco-Oakland also ranked in the upper fourth of the areas in pay levels for a majority of the men's occupations. Lowest average hourly earnings were recorded in Dallas for most occupations. Two of the New England areas (Boston and Worcester) also ranked comparatively low in a majority of the occupations.

Tool and die makers had the highest average hourly earnings among the occupations in most of



the areas studied. Men engaged in the production or maintenance of tools and dies used in the establishments in which they were employed had average earnings of \$3 or more in half of the areas; among all areas, they ranged from \$2.53 in Dallas to \$3.49 in San Francisco-Oakland. The average earnings of machine-tool operators (class A), who set up their own machines and perform a variety of machining operations to close tolerances, ranged from \$2.28 in Dallas to \$3.13 in Detroit; in 15 of the areas, their earnings averaged from \$2.50 to \$2.90. For the intermediate group of machine-tool operators (class B), earnings were between 20 and 40 cents an hour lower than those for class A operators in a majority of the areas; a similar differential also existed in a majority of the areas between the intermediate classification and oper-

ators performing the more routine, repetitive, machining operations (class C).

Among the unskilled jobs studied, average hourly earnings of men janitors and cleaners ranged from \$1.42 in Dallas to \$2.28 in Portland, Ore. Hourly earnings for material handling laborers were slightly higher in all areas except Dallas, ranging from \$1.41 in that city to \$2.42 in Detroit. Men janitors in Baltimore were the only other workers in these two job classifications averaging less than \$1.70 an hour.

Women accounted for fewer than a tenth of the machinery manufacturing plant workers in the 21 areas combined. In Hartford, over a fifth of the workers were women, but in other areas their employment exceeded a tenth only in Baltimore, Milwaukee, St. Louis, and San Francisco-Oakland

TABLE 2. AVERAGE STRAIGHT-TIME HOURLY EARNINGS<sup>1</sup> OF MEN IN SELECTED PRODUCTION OCCUPATIONS IN MACHINERY MANUFACTURING ESTABLISHMENTS IN 21 AREAS SURVEYED BETWEEN DECEMBER 1959 AND MAY 1960<sup>2</sup>

Occupation	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
Assemblers, class A.....	\$2.54	\$2.55	\$2.52	\$2.58	\$2.76	\$2.55	\$2.57	\$3.00	\$2.79	\$2.08	\$2.54
Assemblers, class B.....	2.29	2.20	2.16	2.39	2.26	2.12	2.27	2.68	2.17	1.73	2.21
Assemblers, class C.....	1.96	1.92	2.00	2.25	2.07	1.99	1.87	2.37	1.64	1.43	1.88
Electricians, maintenance.....	2.57	2.75	2.50	2.63	2.81	2.77	2.77	2.93	2.65	2.39	3.09
Inspectors, class A.....	2.58	2.36	2.48	2.69	2.55	2.76	2.60	3.16	2.79	2.34	2.78
Inspectors, class B.....	2.21	2.26	2.33	2.46	2.39	2.24	2.69	2.62	2.46	1.92	2.76
Inspectors, class C.....	2.17	2.17	2.40	2.15	1.64	2.51	2.51	2.51	2.51	2.51	2.19
Janitors, porters, and cleaners.....	1.72	1.85	1.83	1.93	1.76	1.77	1.89	2.14	1.57	1.42	1.82
Laborers, material handling.....	1.95	1.91	1.93	2.06	1.86	1.86	2.00	2.21	1.73	1.41	1.88
Machine-tool operators, production, class A <sup>3</sup> .....	2.51	2.57	2.42	2.56	2.64	2.56	2.70	2.94	2.57	2.28	2.67
Automatic-lathe operators, class A.....	2.52	2.52	2.39	2.39	2.52	2.52	3.01	2.52	2.52	2.31	2.71
Drill-press operators, radial, class A.....	2.56	2.43	2.31	2.51	2.75	2.59	2.65	2.67	2.77	2.77	2.66
Drill-press operators, single- or multiple-spindle, class A.....	2.56	2.16	2.34	2.34	2.38	2.31	2.37	2.37	2.37	2.13	2.41
Engine-lathe operators, class A.....	2.48	2.63	2.39	2.54	2.58	2.62	2.68	3.05	2.42	2.33	2.80
Grinding-machine operators, class A.....	2.61	2.65	2.46	2.53	2.50	2.64	2.47	2.89	2.78	2.37	2.53
Milling-machine operators, class A.....	2.66	2.59	2.43	2.56	2.61	2.57	2.66	2.90	2.88	2.30	2.74
Screw-machine operators, automatic, class A.....	2.61	2.44	2.44	2.93	2.53	2.53	2.53	2.53	2.53	2.32	2.58
Turret-lathe operators, hand (including hand screw machine), class A.....	2.46	2.64	2.37	2.48	2.71	2.52	2.67	2.92	2.73	2.28	2.69
Machine-tool operators, production, class B <sup>3</sup> .....	2.17	2.38	2.19	2.33	2.46	2.14	2.63	2.60	2.33	1.89	2.62
Automatic-lathe operators, class B.....	2.06	2.14	2.05	2.28	2.42	2.26	2.24	2.65	2.65	1.79	2.56
Drill-press operators, radial, class B.....	2.07	2.29	2.33	2.33	2.32	2.00	2.27	2.13	2.13	2.13	2.39
Drill-press operators, single- or multiple-spindle, class B.....	2.26	2.29	2.12	2.26	2.26	2.26	2.35	2.81	2.05	2.16	2.39
Engine-lathe operators, class B.....	2.21	2.43	2.19	2.31	2.31	2.16	2.16	2.16	2.16	1.91	2.16
Grinding-machine operators, class B.....	2.27	2.27	2.25	2.48	2.18	2.06	2.06	2.07	2.00	1.90	1.90
Milling-machine operators, class B.....	2.05	2.58	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42
Screw-machine operators, automatic, class B.....	2.14	2.40	2.16	2.34	2.35	2.29	2.74	2.70	2.11	1.92	2.52
Turret-lathe operators, hand (including hand screw machine), class B.....	2.14	2.40	2.16	2.34	2.35	2.29	2.74	2.70	2.11	1.92	2.52
Machine-tool operators, production, class C <sup>3</sup> .....	1.85	2.37	1.87	2.28	2.04	1.82	2.20	2.20	1.79	1.66	2.18
Drill-press operators, single- or multiple-spindle, class C.....	1.73	2.24	2.14	2.06	1.64	1.64	1.64	1.64	1.64	1.56	1.56
Engine-lathe operators, class C.....	2.04	2.04	2.04	2.04	1.83	1.83	1.83	1.83	1.83	1.93	1.93
Grinding-machine operators, class C.....	2.21	2.47	1.92	2.06	1.82	1.82	1.82	1.82	1.82	1.74	1.74
Milling-machine operators, class C.....	1.93	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27
Turret-lathe operators, hand (including hand screw machine), class C.....	1.91	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32
Machine-tool operators, toolroom <sup>4</sup> .....	2.46	2.72	2.33	2.70	2.74	2.63	2.80	2.89	2.64	2.49	2.49
Machinists, production.....	2.35	2.35	2.35	2.35	2.57	2.76	2.60	3.19	2.75	2.36	2.79
Tool and die makers (jobbing) <sup>4</sup> .....	2.77	2.70	2.73	2.73	2.89	2.78	3.02	3.02	2.74	2.53	3.00
Tool and die makers (other than jobbing) <sup>4</sup> .....	2.72	2.80	2.87	2.87	2.85	2.85	3.14	3.02	2.74	2.53	3.00
Welders, hand, class A.....	2.41	2.72	2.59	2.67	2.76	2.56	2.74	2.86	2.65	2.12	2.79
Welders, hand, class B.....	2.03	2.03	2.09	2.46	2.45	2.30	2.30	2.56	2.19	1.76	2.68

See footnotes at end of table.

TABLE 2. AVERAGE STRAIGHT-TIME HOURLY EARNINGS<sup>1</sup> OF MEN IN SELECTED PRODUCTION OCCUPATIONS IN MACHINERY MANUFACTURING ESTABLISHMENTS IN 21 AREAS SURVEYED BETWEEN DECEMBER 1959 AND MAY 1960<sup>2</sup>—Continued

Occupation	Middle West						Far West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Assemblers, class A.....	\$2.76	\$2.82	\$3.07	\$2.96	\$2.47	\$2.51	\$2.67	\$2.65	\$2.94	\$2.95
Assemblers, class B.....	2.46	2.67	2.58	2.63	2.21	2.28	2.31	2.20	2.56	2.60
Assemblers, class C.....	2.10	2.32	2.42	2.45	1.91	2.03	2.00	1.92	2.40	2.36
Electricians, maintenance.....	3.00	2.87	3.20	2.98	2.74	2.89	2.67	2.86	2.86	3.15
Inspectors, class A.....	2.75	2.74	3.11	2.79	2.46	2.79	2.64	2.74	2.89	2.90
Inspectors, class B.....	2.47	2.64	2.64	2.65	2.09	2.55	2.39	2.37	2.37	2.37
Inspectors, class C.....	2.40	2.47	2.46	2.32	1.89	2.10	2.07	2.07	2.07	2.07
Janitors, porters, and cleaners.....	1.97	1.98	2.27	2.08	1.87	1.85	1.80	1.95	2.28	2.27
Laborers, material handling.....	2.07	2.14	2.42	2.18	1.96	1.97	2.07	2.07	2.41	2.36
Machine-tool operators, production, class A <sup>3</sup> .....	2.81	2.80	3.13	2.88	2.50	3.03	2.80	2.75	2.87	3.05
Automatic-lathe operators, class A.....	2.76	2.76	2.90	2.78	2.51	2.73	2.75	2.75	2.81	2.95
Drill-press operators, radial, class A.....	2.74	2.77	3.11	2.76	2.57	2.75	2.67	2.74	2.81	2.95
Drill-press operators, single- or multiple-spindle, class A.....	2.65	3.02	2.80	2.78	2.48	2.48	2.41	2.41	2.41	2.41
Engine-lathe operators, class A.....	2.77	2.73	3.12	2.80	2.52	2.52	3.22	2.75	2.87	2.99
Grinding-machine operators, class A.....	2.81	2.86	3.16	2.91	2.48	2.99	3.28	2.88	2.85	2.99
Milling-machine operators, class A.....	2.89	2.85	3.15	2.87	2.56	2.56	3.19	2.70	2.87	2.98
Screw-machine operators, automatic, class A.....	2.87	2.93	2.99	3.06	2.46	2.80	3.20	2.77	2.77	2.95
Turret-lathe operators, hand (including hand screw machine), class A.....	2.89	2.82	2.80	2.80	2.51	2.75	2.96	2.70	2.87	2.97
Machine-tool operators, production, class B <sup>1</sup> .....	2.54	2.57	2.63	2.62	2.25	2.40	2.33	2.33	2.57	2.64
Automatic-lathe operators, class B.....	2.61	2.36	2.57	2.48	2.51	2.73	2.59	2.59	2.57	2.62
Drill-press operators, radial, class B.....	2.61	2.36	2.52	2.54	2.30	2.11	2.59	2.59	2.57	2.62
Drill-press operators, single- or multiple-spindle, class B.....	2.49	2.06	2.50	2.59	2.14	2.35	2.43	2.21	2.21	2.64
Engine-lathe operators, class B.....	2.48	2.81	2.84	2.49	2.28	2.71	2.28	2.28	2.28	2.28
Grinding-machine operators, class B.....	2.44	2.58	2.64	2.75	2.27	2.33	2.29	2.41	2.41	2.62
Milling-machine operators, class B.....	2.61	2.48	2.63	2.65	2.27	2.13	2.26	2.33	2.33	2.60
Screw-machine operators, automatic, class B.....	2.75	2.53	2.77	2.69	2.69	2.69	2.69	2.69	2.69	2.69
Turret-lathe operators, hand (including hand screw machine), class B.....	2.58	2.54	2.64	2.61	2.26	2.23	2.29	2.35	2.57	2.66
Machine-tool operators, production, class C <sup>1</sup> .....	2.16	2.19	2.37	2.39	1.90	2.15	2.12	2.01	2.32	2.37
Drill-press operators, single- or multiple-spindle, class C.....	2.18	2.19	2.35	2.45	1.87	2.06	2.06	2.08	2.08	2.08
Engine-lathe operators, class C.....	2.43	2.18	2.25	2.25	2.06	2.06	2.06	2.06	2.06	2.06
Grinding-machine operators, class C.....	2.16	2.18	2.35	2.52	2.06	2.06	2.06	2.06	2.06	2.06
Milling-machine operators, class C.....	2.18	2.28	2.40	2.61	2.11	2.11	2.11	2.24	2.24	2.24
Turret-lathe operators, hand (including hand screw machine), class C.....	2.24	2.18	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
Machine-tool operators, toolroom <sup>4</sup> .....	2.74	2.86	3.49	2.86	2.63	3.10	2.50	2.90	2.93	3.09
Machinists, production.....	3.43	3.02	3.56	3.18	3.11	3.11	3.11	3.12	3.12	3.12
Tool and die makers (jobbing) <sup>4</sup> .....	3.12	3.08	3.30	3.13	2.87	3.25	2.76	3.03	3.03	3.49
Tool and die makers (other than jobbing) <sup>4</sup> .....	2.74	2.67	2.87	2.82	2.47	2.59	2.53	2.76	2.82	2.95
Welders, hand, class A.....	2.49	2.39	2.66	2.49	2.49	2.26	2.29	2.35	2.35	2.35
Welders, hand, class B.....	2.49	2.39	2.66	2.49	2.49	2.26	2.29	2.35	2.35	2.35

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Data relate to December 1959 in Denver; January 1960 in Boston, Buffalo, Pittsburgh, San Francisco-Oakland, and Worcester; February 1960 in Dallas, Hartford, Minneapolis-St. Paul, Newark and Jersey City, and St. Louis; April 1960 in Detroit and Portland (Oreg.); May 1960 in Los Angeles-Long Beach; and March 1960 in the remaining areas. The areas are the standard metropolitan statistical areas except: Chicago (Cook County); Hartford (Hartford metropolitan area and Berlin, Bristol, New Britain, Plainville, Plymouth, and Southington, Conn.); Newark and Jersey City (Essex,

Hudson, Morris, and Union Counties); New York City (the 5 boroughs); Philadelphia (Philadelphia and Delaware Counties, Pa., and Camden County, N.J.); and Worcester (Worcester metropolitan area, except Northbridge).

<sup>3</sup> Includes data for operators of other machine tools in addition to those shown separately.

<sup>4</sup> Definition of this occupation differs from the 1958-59 study. Effect on comparability of wages varied among areas (see BLS Report 170).

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

(11, 12, 14, and 14 percent, respectively). Most of the women workers were engaged in routine assembly and inspection or repetitive machine operations. Those performing routine assembly operations (class C), the largest group among jobs studied, had average earnings ranging from \$1.65 an hour in Minneapolis-St. Paul to \$2.32 in Detroit in the nine areas where the data permit comparison.

In the two largest machinery producing centers (Detroit and Chicago), pay levels for nearly all jobs that could be compared were higher in shops producing special dies and tools than in shops

producing standard accessory items in quantity. (See table 3.)

In most instances where comparisons by method of wage payment were possible, earnings for workers paid on an incentive basis were higher than for workers on the same job who were paid time rates.

### Shift Employment and Shift Differential Pay

The proportion of workers employed on late shifts was about the same during the winter of 1959-60 as 2 years earlier in most of the 21 areas surveyed. Eighteen percent of the production

workers in the 21 areas combined were employed on late shifts at the time of the latest survey, compared with 17 percent at the time of the 1958 study. Among areas, extra-shift employment ranged from about 5 percent of the production workers in New York City to over 30 percent in Houston and Pittsburgh. About 87 percent of the extra-shift workers were employed on the second shift. Nearly all extra-shift workers received pay differentials over day-shift rates—generally on a cents-per-hour or a percentage basis. The majority of the extra-shift workers in Portland and San Francisco-Oakland received a full day's pay for less than a full day's work, plus a cents-per-hour or percentage differential. The amount of the shift differentials varied greatly; however, 10 percent over day-shift rates was most commonly found for both second- and third-shift workers.

### Work Schedules

A majority of the production workers in all areas surveyed except Dallas had weekly work schedules of 40 hours at the time of the survey. In Dallas, 55 percent of the workers were in establishments with scheduled workweeks of more than 40 hours.

Weekly work schedules of 40 hours applied to a majority of the office workers in all areas except

New York City, where 90 percent of the workers were in establishments with workweeks of less than 40 hours. Buffalo, Dallas, and Worcester were the only areas having substantial numbers of office workers with workweeks of over 40 hours.

### Supplementary Wage Benefits

Virtually all workers in the nonelectrical machinery industries in the areas surveyed were eligible for paid holidays, paid vacations, and some type of insurance or pension plan (table 4). Provisions for office workers were generally somewhat more liberal than those for production workers. The main development in the past few years has been in the liberalization of existing plans, such as adding a paid holiday, increasing the amount of vacation pay after longer periods of service, or adding another type of insurance coverage.

The amount of vacation pay varied with the worker's length of service. Nearly all production workers in the 21 areas were in establishments which provided at least 1 week of vacation pay after 1 year of service. A majority of the workers were provided 2 weeks' pay or more after 2 years' service in 4 areas—Houston, Los Angeles-Long Beach, New York City, and San Francisco-Oakland. After 3 years' service, the majority of workers in 12 areas received 2 weeks' pay or more, and

TABLE 3. AVERAGE STRAIGHT-TIME HOURLY EARNINGS<sup>1</sup> OF MEN IN SELECTED PRODUCTION OCCUPATIONS IN ESTABLISHMENTS MANUFACTURING SPECIAL DIES AND TOOLS AND MACHINE-TOOL ACCESSORIES IN EIGHT SELECTED AREAS<sup>2</sup> SURVEYED BETWEEN DECEMBER 1959 AND MAY 1960

Occupation	Chicago		Cleveland	Detroit		Hartford	Los Angeles-Long Beach	Milwaukee	Newark and Jersey City	New York City
	Special dies and tools	Machine-tool accessories	Special dies and tools	Special dies and tools	Machine-tool accessories	Special dies and tools and machine-tool accessories				
Electricians, maintenance.....		\$2.95	\$2.68	\$3.58	\$3.28	\$2.47				
Inspectors, class A.....	\$2.74	2.64	2.97		3.02	2.37	\$2.85	\$2.97	\$2.80	
Janitors, porters, and cleaners.....	1.85	2.01	1.77	2.35	2.12	1.64	1.74	1.71	1.57	\$1.54
Laborers, material handling.....	2.16	2.08	1.78	2.60		1.84	2.01		1.54	
Machine-tool operators, production, class A <sup>3</sup> .....		2.89			2.98	2.66	2.93			2.31
Engine-lathe operators, class A.....		2.70			2.85	2.65	2.85			
Grinding-machine operators, class A.....		2.89			3.02	2.71	3.03			
Milling-machine operators, class A.....		3.01			3.02	2.49	2.82			
Machine-tool operators, production, class B <sup>3</sup> .....	2.54	2.42	2.38	2.74	2.65	2.24	2.35	2.41	2.33	2.05
Engine-lathe operators, class B.....	2.68	2.46				2.29		2.45	2.37	2.11
Grinding-machine operators, class B.....		2.36	2.53		2.65	2.28	2.39	2.39	2.51	
Milling-machine operators, class B.....		2.61	2.40	2.74	2.68	2.20	2.32			
Turret-lathe operators, hand, (including hand screw machine), class B.....		2.41	2.32		2.38	2.37				
Machine-tool operators, production, class C.....	2.01	1.93			2.28	1.94		2.09	1.90	1.69
Machine-tool operators, toolroom <sup>4</sup> .....	3.15	2.70	2.82	3.53	3.14	2.20	3.00	2.82	2.59	2.58
Tool and die makers (jobbing) <sup>4</sup> .....	3.44		3.02	3.56		2.64	3.13	3.18	2.89	2.78

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> See footnote 2, table 2.

<sup>3</sup> Includes data for operators of other machine tools in addition to those shown separately.

<sup>4</sup> Definition of this occupation differs from the 1958-59 study. Effect on comparability of wages varied among areas (see BLS Report 170).

NOTE: Dashes indicate no data reported or data that do not meet publication criteria.

after 5 years' service, over four-fifths of the workers in each of the 21 areas received at least 2 weeks of vacation pay. At least three-fifths of the workers in all areas except Dallas received 3 weeks' pay or more after 15 years of service. Some workers in all areas except Pittsburgh received 4 weeks' pay or more after 25 years of service. Houston and Milwaukee, however, were the only areas in which more than half of the production workers were in establishments providing at least 4 weeks' vacation pay after 25 years of service.

More than half of the office workers in all areas surveyed received 2 weeks' vacation pay after 2 years of service. Paid vacation provisions were substantially more liberal during the first 3 years of service for office workers than for plant workers.

All or nearly all of the production workers in each of the 21 areas surveyed were provided holidays with pay. More than three-fifths of the workers in Boston, Worcester, and New York City received 8 or more full-day holidays; a majority of

the production workers in Dallas received 5 full days. In all other areas, the majority of the workers were provided either 6 or 7 full-day paid holidays. Some of the production workers in all areas studied in the New England, Middle Atlantic, and Middle West regions received half-day holidays in addition to full-day holidays. Thus, nearly three-fifths of the workers in Detroit received 2 half days as well as 6 full-day paid holidays.

Two-thirds of the office workers in Boston and three-fifths of such workers in New York City received 9 or more full-day holidays with pay. Almost three-fourths of the office workers in Worcester received 8 or more full-day holidays. In all other areas, the majority of the office workers were provided 6 or 7 full-day holidays annually. Also, half-day holidays were provided to some office workers in all areas except Dallas and Portland.

More than 90 percent of the production and office workers in all areas were in establishments with some type of health, insurance, or pension

TABLE 4. PERCENT OF PRODUCTION WORKERS EMPLOYED IN MACHINERY MANUFACTURING ESTABLISHMENTS WITH FORMAL PROVISIONS FOR SELECTED SUPPLEMENTARY WAGE BENEFITS<sup>1</sup> IN 21 AREAS SURVEYED BETWEEN DECEMBER 1959 AND MAY 1960

Benefit	New England			Middle Atlantic					South		
	Boston	Hartford	Worcester	Buffalo	Newark and Jersey City	New York City	Philadelphia	Pittsburgh	Baltimore	Dallas	Houston
Paid vacations <sup>2</sup> :											
After 1 year of service <sup>3</sup> :	100	100	100	100	100	100	100	100	100	99	100
1 week.....	85	90	81	88	92	92	97	95	97	85	89
Over 1 week.....	15	10	19	12	8	8	3	5	3	14	11
After 5 years of service <sup>3</sup> :	100	100	100	100	100	100	100	100	100	99	100
2 weeks.....	93	90	97	98	81	88	97	91	90	82	100
Over 2 weeks.....	4				3	5		1		5	
After 15 years of service <sup>3</sup> :	100	100	100	100	100	100	100	100	100	99	100
2 weeks.....	21	3	9	12	20	35	9	3	20	70	20
3 weeks.....	77	97	86	86	79	60	89	97	72	26	80
Over 3 weeks.....											
After 25 years of service <sup>3</sup> :	100	100	100	100	100	100	100	100	100	99	100
2 weeks.....	21	3	7	12	17	34	8	2	17	70	20
3 weeks.....	57	92	46	54	74	59	72	38	49	22	22
Over 3 but less than 4 weeks.....				3				60			2
4 weeks and over.....	20	5	42	29	8	2	19		27	3	56
Paid holidays <sup>4</sup> :	100	100	100	100	100	100	100	100	100	100	99
Less than 6 days.....		2					4			37	3
6 days.....	12	1		5	3	2	3	5	22	29	16
6 days plus 1 or more half days.....	1	9		31	22	3	2	27	30		2
7 days.....	13	28	19	23	15	13	52	63	36	14	52
7 days plus 1 or more half days.....	7	34	10	16	14	2	17	3			
8 days.....	6	21	41	13	14	26	8	2	12		26
8 days plus 1 or more half days.....	15		22	9	12	18	13				
9 or more days.....	48	5		4	20	36	2				
Health, insurance, and pension plans: <sup>5</sup>											
Life insurance.....	96	99	100	99	85	87	97	98	88	76	98
Accidental death and dismemberment insurance.....	79	83	76	50	51	47	78	43	64	63	55
Sickness and accident insurance or sick leave <sup>7</sup> .....	92	96	100	84	71	67	97	97	97	48	87
Sickness and accident insurance.....	92	95	100	84	68	52	97	96	94	43	83
Sick leave (full pay, no waiting period).....	4				4	21	2	1		5	6
Sick leave (partial pay or waiting period).....	3	(*)			5	2			8		21
Hospitalization insurance.....	92	93	93	99	95	89	95	97	89	80	98
Surgical insurance.....	90	93	93	99	90	87	92	90	85	80	98
Medical insurance.....	79	83	93	47	69	57	57	46	76	45	44
Catastrophe insurance.....	36	35	30	14	4	5	30	31	6	23	49
Retirement pension.....	64	87	92	76	68	43	83	84	70	36	73

See footnotes at end of table.



TABLE 4. PERCENT OF PRODUCTION WORKERS EMPLOYED IN MACHINERY MANUFACTURING ESTABLISHMENTS WITH FORMAL PROVISIONS FOR SELECTED SUPPLEMENTARY WAGE BENEFITS<sup>1</sup> IN 21 AREAS SURVEYED BETWEEN DECEMBER 1959 AND MAY 1960—Continued

Benefit	Middle West						Far West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Paid vacations <sup>2,3</sup>	100	100	98	99	100	100	100	99	100	100
After 1 year of service <sup>4</sup>	100	100	98	99	100	99	100	99	100	100
1 week	87	74	69	98	88	82	95	83	97	18
Over 1 week	12	26	29	1	12	17	5	17	3	82
After 5 years of service <sup>4</sup>	100	100	98	99	100	100	100	99	100	100
2 weeks	96	92	75	93	93	89	94	76	88	98
Over 2 weeks	2	4	21	6	7	11	—	15	9	2
After 15 years of service <sup>4</sup>	100	100	98	99	100	100	100	99	100	100
2 weeks	12	13	23	1	12	5	15	33	8	4
3 weeks	83	83	60	92	83	89	81	55	89	94
Over 3 weeks	5	3	1	5	6	—	—	11	—	2
After 25 years of service <sup>4</sup>	100	100	98	99	100	100	100	99	100	100
2 weeks	12	13	23	1	13	5	15	32	8	4
3 weeks	82	66	89	17	64	89	76	54	83	91
Over 3 but less than 4 weeks	7	5	1	3	2	4	—	11	—	2
4 weeks and over	30	15	2	77	21	2	5	2	7	3
Paid holidays <sup>4</sup>	99	99	95	99	100	100	100	99	100	100
Less than 6 days	—	( <sup>5</sup> )	3	—	—	1	—	4	—	—
6 days	20	23	28	8	21	4	20	28	19	4
6 days plus 1 or more half days	30	45	59	29	45	4	24	18	—	—
7 days	39	15	4	59	30	78	56	36	81	—
7 days plus 1 or more half days	4	12	1	1	2	4	—	11	—	84
8 days	5	3	—	1	1	9	—	3	—	4
8 days plus 1 or more half days	—	—	—	—	—	—	—	—	—	—
9 or more days	( <sup>5</sup> )	—	—	( <sup>5</sup> )	—	—	—	—	—	—
Health, insurance, and pension plans: <sup>6</sup>										
Life insurance	91	94	95	98	81	96	92	94	97	100
Accidental death and dismemberment insurance	63	56	74	76	56	79	49	78	97	97
Sickness and accident insurance or sick leave <sup>7</sup>	87	91	92	97	92	98	73	69	79	12
Sickness and accident insurance	84	91	92	97	84	98	73	46	79	10
Sick leave (full pay, no waiting period)	1	—	17	—	8	—	—	19	—	2
Sick leave (partial pay or waiting period)	3	—	—	—	1	—	—	6	—	—
Hospitalization insurance	93	89	95	100	89	95	87	98	97	100
Surgical insurance	92	86	95	100	89	94	87	98	97	100
Medical insurance	70	56	94	85	88	92	84	68	97	100
Catastrophe insurance	11	5	—	6	3	2	3	21	5	80
Retirement pension	55	68	73	85	37	61	46	33	25	41

<sup>1</sup> If formal provisions for supplementary benefits in an establishment were applicable to half or more of the workers, the benefit was considered applicable to all workers. Because of length-of-service and other eligibility requirements, the proportion of workers currently receiving the benefits may be smaller than estimated.

<sup>2</sup> Vacation benefits, such as a percentage of annual earnings and flat-sum amounts, were converted to an equivalent time basis. The periods of service were arbitrarily chosen and do not necessarily reflect individual provisions for progression. For example, the changes indicated at 15 years may include changes occurring between 5 and 15 years.

<sup>3</sup> Includes provisions in addition to those shown separately.

<sup>4</sup> Because of rounding, sums of individual items may not equal totals.

<sup>5</sup> Less than 0.5 percent.

<sup>6</sup> Includes only those plans for which at least a part of the cost was borne by the employer and excludes workmen's compensation, social security, and plans which met only the minimum requirements of State laws as to benefits or employer contributions.

<sup>7</sup> Unduplicated total of workers receiving sick leave or sickness and accident insurance shown separately.

plan financed wholly or in part by the employers. Life insurance, hospitalization, and surgical plans were available to about four-fifths or more of these workers in virtually all areas. Seven-tenths or more of the production workers in 12 areas were in establishments with medical insurance plans providing complete or partial payment of doctors' fees. Three-tenths or more of the production workers in seven areas were in establishments with catastrophe insurance plans covering the employees in case of major medical expenses.

Nine-tenths or more of the production workers in 11 of the 21 areas were in establishments with sickness and accident insurance or sick-leave plans. Sickness and accident insurance benefit plans were more prevalent for both office and production workers in these industries than were

formal sick-leave plans. Sick-leave plans were applicable to 60 percent or more of the office workers in 12 areas; however, in only 5 areas were 10 percent or more of the production workers covered by such plans.

More than three-fifths of the workers in 13 of the 21 areas were in establishments with retirement plans (other than social security) covering production workers. Retirement plans covering office workers were reported in establishments employing 50 percent or more of these workers in all areas except Los Angeles-Long Beach. The prevalence of retirement plans for production workers varied greatly, ranging from one-fourth in Portland to over nine-tenths in Worcester.

—MORRIS H. RICE

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## Earnings of Communications Workers in October 1959

EARNINGS OF the 659,309 employees (excepting officials and managerial assistants) of the principal communications carriers in the United States averaged \$2.42 an hour in October 1959.<sup>1</sup> This was an increase of 5 percent above the October 1958 average (\$2.30) and 95 percent above the October 1947 average (\$1.24). Since October 1947, the date of the first of a series of annual studies summarized by the U.S. Department of Labor's Bureau of Labor Statistics, the level of employee earnings has increased by more than 70 percent in each of the four main carrier groups included in the study—class A telephone carriers, Western Union Telegraph Co., radiotelegraph carriers, and ocean-cable carriers.

Employment of class A telephone carriers, accounting for 94 percent of the workers covered by the study, declined approximately 2 percent during the past year but was still 12 percent above the October 1947 level. The number of Western Union employees declined about 2 percent during the October 1958–59 period and over 38 percent since October 1947. Employment levels rose approximately 2 percent for radiotelegraph carriers and remained about the same for ocean-cable carriers between October 1958 and October 1959, but declined 23 and 8 percent in the respective groups in the period October 1947–October 1959.

### Class A Telephone Carriers

*Earnings in 1959.* Employees of the 51 class A telephone carriers included in the study averaged \$2.43 an hour in October 1959—12 cents above the October 1958 average. Individual earnings of the 621,281 employees (excluding officials and managerial assistants) were widely dispersed. The middle half of the workers earned from \$1.72 to \$2.92 an hour in October 1959. A number of factors contributed to this dispersion of hourly rates, including (1) the great diversity of skills and responsibilities required in the industry; (2) pay differences among regions and among establishments within the same region; and (3) the general practice, followed by individual companies,

of providing a range of rates for workers in a given job and locality.

The level of earnings varied greatly according to the duties of the workers, ranging from an average of \$1.38 an hour for trainee telephone operators to \$4.60 an hour for professional and semiprofessional employees. Regionally, average earnings for all employees, excluding officials and managerial assistants, ranged from \$2.11 an hour in the Southeast to \$2.58 an hour in the Pacific region (table 1).

Employees of the Bell System companies, which accounted for 96 percent of class A telephone carrier employment, averaged \$2.45 an hour, as compared with \$1.84 an hour for employees of non-Bell companies. Differences in the occupational makeup of the two groups accounted for some of the difference in the all-worker averages; for example, the Bell System companies had a greater proportion of employees in clerical, sales, and professional jobs. However, other factors, such as size of firm and size of community, were undoubtedly of great importance in contributing to the different wage levels. Average employment of the 23 reporting units of the Bell System companies, each of which generally covers an entire State or group of States, was approximately 26,000 workers. Most of the 28 non-Bell companies were more local in service and usually employed fewer than 1,000 workers.

An individual employee's rate of pay was also influenced to a considerable extent by his length of service with the company. Established provisions for length-of-service wage adjustments, which were prevalent in the industry, typically provided a range of rates for each job, with the top rate as much as 100 percent above the beginning rate.

<sup>1</sup> Based on annual reports filed with the Federal Communications Commission by carriers engaged in interstate or foreign communications by means of their own facilities or through connections with the facilities of another carrier under direct or indirect common control. These reports do not include radiotelegraph and ocean-cable carriers with annual operating revenues below \$50,000 or telephone carriers with annual operating revenues below \$250,000. For further details of the study, including data on additional occupations, see *Earnings of Communications Workers, October 1959*, BLS Report 171. It is estimated that this study covers approximately nine-tenths of the workers in the communications industries. The earnings data contained in the summary, which pertain to all workers except officials and managerial assistants, were computed by dividing scheduled weekly compensation by scheduled weekly hours. For a summary of the Bureau's study of communications workers' earnings in October 1958, see *Monthly Labor Review*, September 1959, pp. 995–999.

Women, accounting for approximately three-fifths of the total work force of class A telephone carriers, were generally employed as telephone operators or clerical employees. Experienced switchboard operators, representing about a fourth of the total employment, averaged \$1.76 an hour and switchboard-operator trainees, \$1.38. Non-supervisory clerical employees—111,060 women and 8,843 men—averaged \$1.92 an hour.

Virtually all of the employees engaged in construction, installation, and maintenance work were men. Average hourly earnings for numerically important job categories in those departments were \$2.92 an hour for exchange repairmen, \$2.83 for test-board men and repeatermen, \$2.79 for cable splicers, \$2.72 for central office repairmen, \$2.74 for PBX and station installers, and \$2.34 for linemen.

Regionally, occupational average hourly earnings were generally highest in the Middle Atlantic and Pacific regions—with the lowest averages most frequent in the Southeast and Mountain regions. The following indexes indicate the relationship of occupational averages for three numerically important occupational groups among the various regions.

Average hourly earnings as a percent of nationwide average (Nationwide average = 100)

	Non-supervisory clerical employees	Experienced switchboard operators	Central office repairmen
New England.....	95	102	103
Middle Atlantic.....	102	106	105
Great Lakes.....	102	104	100
Chesapeake.....	99	98	100
Southeast.....	93	85	94
North Central.....	90	89	102
South Central.....	95	95	100
Mountain.....	91	94	92
Pacific.....	106	107	100

For each of the three occupational groups, average hourly earnings in the Middle Atlantic, Great Lakes, and Pacific regions were equal to or above national averages and in the Southeast and Mountain regions, were below national averages. It should be noted that the maximum interregional wage spread was somewhat greater for switchboard operators than for the other two jobs.

<sup>1</sup> The percent rise in the all-employee average exceeded the increase in most individual job categories because of long-term shifts in the occupational composition of the labor force in the industry.

Average hourly earnings by occupation in the Bell System companies were substantially higher than those in the non-Bell companies. For example, the average wage advantage for employees of Bell System companies was as follows: 41 cents an hour for experienced switchboard operators, 38 cents for nonsupervisory clerical employees, 45 cents for central office repairmen, and 39 cents for linemen. However, the average scheduled workweek was longer by more than 1½ hours in the non-Bell companies, thus partially offsetting the lower hourly rates.

*Earnings and Employment, 1947-59.* During the past 12 years, the level of wages increased substantially in the telephone industry. Average hourly earnings for all employees in October 1959 (\$2.43) were 5 percent above the 1958 average (\$2.31) and 93 percent above the October 1947 average (\$1.26).<sup>2</sup> The tabulation below shows for major occupational groups the increases in average earnings, in both absolute and relative terms, that occurred over the 12-year period from 1947 to 1959.

	Average hourly earnings		Amount of increase	
	Oct. 1947	Oct. 1959	Cents	Percent
Experienced switchboard operators.....	\$0. 97	\$1. 76	79	81
Cable splicers' helpers.....	1. 02	1. 92	90	88
Clerical employees, nonsupervisory.....	1. 13	1. 92	79	70
Linemen.....	1. 18	2. 34	116	98
PBX and station installers.....	1. 44	2. 74	130	90
Cable splicers.....	1. 61	2. 79	118	73

Although total employment of class A telephone carriers in October 1959 was approximately 12 percent above the level reported in 1947, it was 1.6 percent below the figure for 1958 and nearly 9 percent below the peak-employment year of 1957. Much of this recent decrease in total employment has come from a substantial decline in the number of telephone operators caused chiefly by the installation of new and improved equipment. The total number of telephone operators (including chief operators and trainees as well as regular operators) declined from 235,700 in October 1957 to 198,500 in October 1959.

Changes in the relative employment of the occupational groups at various intervals during the past 12 years are shown on the following page.

	Percent of total employment in—				
	Oct. 1947	Oct. 1952	Oct. 1957	Oct. 1958	Oct. 1959
Telephone operators..	46	43	35	33	32
Clerical employees, non-supervisory.....	16	18	19	19	19
Construction, installation, and maintenance employees.....	23	23	27	28	28
Other.....	15	16	19	20	21
All employees except officials and managerial assistants (thousands).....	552.7	610.6	681.6	631.5	621.3

### Western Union Telegraph Co.

Nonmessenger employees<sup>3</sup> of Western Union's wire-telegraph operations averaged \$2.29 an hour, excluding premium pay for overtime and for work on weekends, holidays, and late shifts, in October 1959 (table 2). This was 3 cents above the

October 1958 average. The 27,390 nonmessenger employees included a wide variety of skills and occupational duties, ranging from relatively unskilled laborers to professional employees; accordingly, individual straight-time rates of pay were widely dispersed.

Although men and women were employed in nearly equal numbers, they tended to be concentrated in different jobs. Average straight-time hourly rates for numerically important jobs predominantly held by women were \$1.80 for experienced telegraph operators (except Morse operators) in the commercial department and \$2.05 for those in the traffic department, \$1.96 for telephone operators, and \$2.10 for nonsupervisory clerical employees. Among the job categories in which men were predominant, average straight-time hourly rates were \$2.17 for Morse operators, \$2.37

<sup>3</sup> Excludes officials and managerial assistants and ocean-cable employees.

TABLE 1. CLASS A TELEPHONE CARRIERS:<sup>1</sup> AVERAGE HOURLY EARNINGS<sup>2</sup> OF EMPLOYEES IN SELECTED OCCUPATIONS BY REGION,<sup>3</sup> OCTOBER 1959

Occupational group	United States <sup>4</sup>		New England		Middle Atlantic		Great Lakes		Chesapeake	
	Number of workers	Average hourly earnings <sup>2</sup>	Number of workers	Average hourly earnings <sup>2</sup>	Number of workers	Average hourly earnings <sup>2</sup>	Number of workers	Average hourly earnings <sup>2</sup>	Number of workers	Average hourly earnings <sup>2</sup>
All employees except officials and managerial assistants.....	621,281	\$2.43	46,736	\$2.42	135,786	\$2.57	112,006	\$2.51	33,068	\$2.40
Cable splicers.....	15,749	\$2.79	1,189	\$2.86	3,105	\$2.97	2,749	\$2.82	988	\$2.79
Cable splicers' helpers.....	4,555	1.92	380	1.95	1,467	1.97	910	1.99	338	1.93
Central office repairmen.....	34,817	2.72	2,134	2.79	7,862	2.85	6,257	2.73	1,675	2.73
Clerical (nonsupervisory).....	119,903	1.92	9,031	1.83	28,732	1.96	20,911	1.96	5,765	1.91
Exchange repairmen.....	13,112	2.92	575	3.02	3,653	2.96	3,942	2.93	378	2.96
Experienced switchboard operators.....	145,809	1.76	12,329	1.80	32,628	1.87	25,897	1.83	8,401	1.73
Linemen.....	16,428	2.34	1,030	2.33	3,481	2.51	2,776	2.40	966	2.05
Mechanics, building and motor-vehicle service.....	3,240	2.63	206	2.58	967	2.66	659	2.80	163	2.43
PBX and station installers.....	25,708	2.74	739	2.75	8,428	2.84	6,598	2.73	606	2.54
Test-board men and repeatermen.....	14,937	2.83	605	2.98	1,567	3.07	1,842	2.93	424	2.96
All employees except officials and managerial assistants.....	68,514	\$2.11	23,304	\$2.23	59,365	\$2.21	26,761	\$2.23	83,810	\$2.58
Cable splicers.....	2,046	\$2.69	587	\$2.54	1,285	\$2.81	705	\$2.53	2,658	\$2.77
Cable splicers' helpers.....	843	1.72	6	1.98	613	1.87	199	1.83	128	2.10
Central office repairmen.....	3,535	2.56	754	2.78	3,122	2.73	1,224	2.50	5,083	2.71
Clerical (nonsupervisory).....	11,963	1.79	4,104	1.72	10,244	1.83	4,989	1.75	17,532	2.03
Exchange repairmen.....	16,906	1.49	5,622	1.57	17,027	1.68	5,566	1.65	15,401	1.80
Experienced switchboard operators.....	1,643	2.16	866	2.12	2,205	2.36	1,043	2.10	1,893	2.51
Linemen.....	468	2.35	70	2.71	111	2.82	52	2.28	500	2.74
Mechanics, building and motor-vehicle service.....	99	1.85	15	1.78	3,221	2.79	868	2.55	4,896	2.69
PBX and station installers.....	1,238	2.74	382	2.82	1,419	2.85	467	2.77	2,934	2.82

<sup>1</sup> Covers telephone carriers with annual operating revenues exceeding \$250,000.

<sup>2</sup> Average hourly earnings were computed by dividing total scheduled weekly compensation by total scheduled weekly hours.

<sup>3</sup> The regions used in this study include: *New England*—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic*—Delaware, New Jersey, New York, and Pennsylvania; *Great Lakes*—Illinois, Indiana, Michigan, Ohio, and Wisconsin; *Chesapeake*—District of Columbia, Maryland, Virginia, and West Virginia; *Southeast*—Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North

Carolina, South Carolina, and Tennessee; *North Central*—Iowa, Minnesota, Nebraska, North Dakota, and South Dakota; *South Central*—Arkansas, Kansas, Missouri, Oklahoma, and Texas (except El Paso County); *Mountain*—Arizona, Colorado, Idaho (south of Salmon River), Montana, Nevada, New Mexico, Texas (El Paso County), Utah, and Wyoming; and *Pacific*—California, Idaho (north of Salmon River), Oregon, and Washington. <sup>4</sup> Figures include long-line employees and class A telephone carrier employees in Hawaii and Puerto Rico. Alaska had no class A telephone carrier reporting to the Federal Communications Commission.



for linemen and cablemen, \$2.44 for subscribers' equipment maintainers, and \$2.65 for traffic testing and regulating employees.

Rates of pay of individual workers varied substantially in many of the specific job categories studied. In many instances, hourly rates of the highest paid worker exceeded those of the lowest paid in the same job category by more than \$1 an hour. However, in other job categories, such as Morse operators, telephone operators, and experienced telegraph operators (except Morse operators) employed in the traffic department, individual rates were closely grouped.

The 5,400 messengers, comprising approximately 16 percent of the total Western Union work force, included 3,534 full-time and 1,866 part-time employees. Average straight-time hourly rates of pay for these two groups were \$1.31 and \$1.05, respectively. Foot and bicycle messengers averaged \$1.06 an hour in October 1959, the same as in October 1958. Motor messengers averaged \$1.70, 7 cents an hour above the previous year.

Straight-time rates of pay for wire-telegraph employees have increased steadily since October 1947. The average of \$2.29 recorded for non-messenger employees in October 1959 was more than double the average reported for October 1947 (\$1.05). During this period, the relationship

among occupational groups on a cents-per-hour basis generally remained the same; however, as in many other industries, the percentage increases tended to be greater for the lower paid groups. Thus, average rates for both subscribers' equipment maintainers and linemen and cablemen increased by 98 percent since 1947, compared with 122 percent for experienced telegraph operators (excluding Morse operators) in the commercial department and 131 percent for telephone operators. On either a cents-per-hour or percentage basis, the increase in average rates of pay for messengers was considerably smaller than that for other occupational groups, amounting to 83 cents, or 95 percent, for motor messengers and 41 cents, or 63 percent, for foot and bicycle messengers.

Total employment of the wire-telegraph operations declined approximately 38 percent between October 1947 and October 1959—from 53,107 to 32,790. However, the reduction of employment among occupational groups varied considerably. The number of Morse telegraph operators declined 74 percent during the period, compared with a decline of 29 percent in the number of non-supervisory clerical employees and 12 percent in construction, installation, and maintenance employees. The number of foot and bicycle messengers dropped nearly 60 percent between 1947

TABLE 2. WESTERN UNION TELEGRAPH CO.: PERCENTAGE DISTRIBUTION OF WIRE-TELEGRAPH EMPLOYEES BY STRAIGHT-TIME AVERAGE HOURLY EARNINGS,<sup>1</sup> SELECTED OCCUPATIONS, OCTOBER 1959

Average hourly earnings <sup>1</sup>	All employees except messengers <sup>2</sup>	Clerical employees, nonsupervisory	Experienced telegraph operators (except Morse)		Laborers	Linemen and cablemen	Morse operators	Subscribers' equipment maintainers	Telephone operators	Messengers, foot and bicycle	Messengers, motor
			Commercial department	Traffic department							
\$1.00 and under \$1.10										70.2	
\$1.10 and under \$1.20										27.0	9.9
\$1.20 and under \$1.30										2.9	.1
\$1.30 and under \$1.40	0.1		0.1								.1
\$1.40 and under \$1.50	1.9	1.4	6.8	0.1	7.7	0.3			0.9		7.4
\$1.50 and under \$1.70	8.6	11.0	25.6	3.1	16.4				12.2		26.0
\$1.70 and under \$1.90	12.2	17.2	34.0	6.2	12.7	.3	4.0	1.4	10.9		50.6
\$1.90 and under \$2.10	27.1	31.0	30.0	85.4	10.0	10.4	8.4	2.3	74.6		6.0
\$2.10 and under \$2.30	13.4	16.4	3.3	8.0	32.3	26.2	85.1	21.8	1.5		
\$2.30 and under \$2.50	12.2	9.7	.1	.2	20.0	32.5	2.6	19.9			
\$2.50 and under \$2.70	7.8	4.0	( <sup>3</sup> )		.9	28.9		48.2			
\$2.70 and under \$2.90	5.9	3.4				.3		6.9			
\$2.90 and under \$3.10	2.0	3.2									
\$3.10 and over	8.8	2.6				.1					
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	27,390	8,946	2,734	2,242	220	740	430	1,059	1,812	2,950	1,450
Average hourly earnings <sup>1</sup>	\$2.29	\$2.10	\$1.80	\$2.05	\$2.02	\$2.37	\$2.17	\$2.44	\$1.96	\$1.06	\$1.70

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Excludes officials and managerial assistants and ocean-cable employees. Data for the latter are incorporated in table 4.

<sup>3</sup> Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal 100.

and 1959, compared with a drop of only 16 percent in the number of motor messengers during the same period. The following tabulation indicates changes in the relative employment of important occupational groups during the past 12 years:

	Percent of total employment in—				
	Oct. 1947	Oct. 1952	Oct. 1957	Oct. 1958	Oct. 1959
Telegraph operators.....	34	32	30	29	28
Messengers, foot and bicycle.....	18	19	14	13	12
Messengers, motor.....	3	3	4	4	4
Clerical employees, nonsupervisory.....	16	16	18	18	18
Construction, installation, and maintenance employees.....	13	13	16	17	18
Other.....	16	17	18	19	20

All employees except officials and managerial assistants (thousands)..... 53.1 39.5 36.2 33.3 32.8

As can be noted, telegraph operators and foot and bicycle messengers accounted for a somewhat smaller proportion of the total employment in October 1959 than in 1947. Employment in most other occupational groups was proportionately higher in October 1959 than during the earlier period.

<sup>4</sup> Excludes officials and managerial assistants and employees working outside the 48 States and the District of Columbia.

## Radiotelegraph Carriers

The 3,885 employees <sup>4</sup> of the five companies engaged in transmitting nonvocal radio communications averaged \$2.69 an hour in October 1959 (table 3). This was an increase of almost 5 percent above the October 1958 average (\$2.57). Men, accounting for about 86 percent of the total employment, greatly outnumbered women in all major occupational categories. Average hourly earnings among the numerically important occupational groups were \$2.32 for nonsupervisory clerical employees, \$2.46 for teletype-multiplex operators, \$3.07 for radio operators, \$3.13 for radio operating technicians, and \$1.18 for foot and bicycle messengers. These occupational groups accounted for approximately three-fifths of the employees of the five radiotelegraph carriers covered by the study.

Individual earnings of the workers were widely dispersed—more than a fourth of the workers earned less than \$2.10 an hour and a similar proportion earned \$3.10 or more in October 1959. However, among some of the occupational groups, individual earnings were concentrated within comparatively narrow limits. Approximately nine-tenths of the foot and bicycle messengers earned from \$1.00 to \$1.30 an hour and almost

TABLE 3. PRINCIPAL RADIOTELEGRAPH CARRIERS:<sup>1</sup> PERCENTAGE DISTRIBUTION OF EMPLOYEES BY AVERAGE HOURLY EARNINGS,<sup>2</sup> SELECTED OCCUPATIONS, OCTOBER 1959

Average hourly earnings <sup>2</sup>	All employees except officials and managerial assistants <sup>3</sup>	Clerical employees, non-supervisory	Marine coastal station operators	Mechanics and maintenance technicians	Messengers, foot and bicycle	Radio operating technicians	Radio operators	Teletype-multiplex operators
\$1.00 and under \$1.10.....	3.4				28.3			
\$1.10 and under \$1.20.....	4.9				40.9			
\$1.20 and under \$1.30.....	2.7	0.2			21.6			
\$1.30 and under \$1.40.....	1.1	.3			8.1			0.2
\$1.40 and under \$1.50.....	.5	.5			.9			.2
\$1.50 and under \$1.70.....	1.9	4.6			.2		0.5	
\$1.70 and under \$1.90.....	4.3	12.5						1.4
\$1.90 and under \$2.10.....	8.9	20.8				0.7		18.0
\$2.10 and under \$2.30.....	8.7	12.8	1.5	1.5		1.4	1.6	25.6
\$2.30 and under \$2.50.....	8.1	11.8	27.5	6.6		5.6	6.3	9.2
\$2.50 and under \$2.70.....	7.8	14.1	5.3	5.6		5.3	2.1	8.8
\$2.70 and under \$2.90.....	7.7	10.4	25.2	14.6		10.9	4.7	8.8
\$2.90 and under \$3.10.....	13.7	8.8	22.1	16.7		13.7	68.4	27.8
\$3.10 and over.....	26.3	3.0	18.3	55.1		62.5	16.3	
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers.....	3,885	955	131	198	467	285	190	489
Average hourly earnings <sup>3</sup> .....	\$2.69	\$2.32	\$2.84	\$3.04	\$1.18	\$3.13	\$3.07	\$2.46

<sup>1</sup> Covers radiotelegraph carriers with annual operating revenues exceeding \$50,000.

<sup>2</sup> See footnote 2, table 1.

<sup>3</sup> Excludes employees working for radiotelegraph carriers outside the 48 States and the District of Columbia.

NOTE: Because of rounding, sums of individual items may not equal 100.

TABLE 4. PRINCIPAL OCEAN-CABLE CARRIERS:<sup>1</sup> PERCENTAGE DISTRIBUTION OF EMPLOYEES BY AVERAGE HOURLY EARNINGS,<sup>2</sup> SELECTED OCCUPATIONS, OCTOBER 1959

Average hourly earnings <sup>2</sup>	All employees except officials and managerial assistants <sup>3</sup>	Cable operators	Clerical employees, non-supervisory	Messengers, foot and bicycle	Teletype-multiplex operators
\$1.00 and under \$1.10...	3.0	-----	-----	26.1	-----
\$1.10 and under \$1.20...	4.1	-----	-----	35.7	-----
\$1.20 and under \$1.30...	3.6	-----	-----	31.2	-----
\$1.30 and under \$1.40...	.3	-----	0.2	1.9	-----
\$1.40 and under \$1.50...	.3	-----	-----	1.9	-----
\$1.50 and under \$1.70...	1.8	-----	3.3	1.9	-----
\$1.70 and under \$1.90...	5.2	-----	11.5	.6	0.9
\$1.90 and under \$2.10...	9.8	-----	16.1	.6	20.9
\$2.10 and under \$2.30...	10.1	-----	15.9	-----	20.0
\$2.30 and under \$2.50...	12.6	-----	16.1	-----	49.1
\$2.50 and under \$2.70...	13.5	6.2	22.3	-----	8.2
\$2.70 and under \$2.90...	7.1	4.2	9.5	-----	.9
\$2.90 and under \$3.10...	10.9	89.6	2.1	-----	-----
\$3.10 and over...	17.7	-----	3.1	-----	-----
Total.....	100.0	100.0	100.0	100.0	100.0
Number of workers...	1,353	96	485	157	110
Average hourly earnings <sup>2</sup> .....	\$2.56	\$2.90	\$2.32	\$1.19	\$2.29

<sup>1</sup> Covers ocean-cable carriers with annual operating revenues exceeding \$50,000; includes ocean-cable employees of Western Union Telegraph Co.

<sup>2</sup> See footnote 2, table 1.

<sup>3</sup> Excludes employees working for ocean-cable carriers outside the 48 States and the District of Columbia.

NOTE: Because of rounding, sums of individual items may not equal 100

seven-tenths of the radio operators earned from \$2.90 to \$3.10.

From October 1947 to October 1959, average hourly earnings of radiotelegraph employees increased by about 91 percent—from \$1.41 to \$2.69. Employment declined about 23 percent, from 5,031 to 3,885, during the same period.

### Ocean-Cable Carriers

The 1,353 workers<sup>4</sup> of the three ocean-cable carriers covered by the study averaged \$2.56 an hour in October 1959 (table 4). This was 4 percent above the October 1958 average (\$2.45) and 71 percent above the October 1947 average (\$1.50). Nonsupervisory clerical employees, the largest

<sup>4</sup> See footnote 4.

occupational group, averaged \$2.32 an hour, an increase of 9 cents an hour over October 1958. Average hourly earnings for other numerically important occupational groups in October 1959 were \$2.90 for cable operators, \$2.29 for teletype-multiplex operators, \$3.13 for mechanics (employed in construction, installation, maintenance, and other technical work), and \$1.19 for foot and bicycle messengers. These occupational groups (including nonsupervisory clerical employees) accounted for about 70 percent of the 1,137 men and 216 women employed by the three ocean-cable carriers studied; wage increases for these groups since 1958 ranged from 4 cents an hour for foot and bicycle messengers to 15 cents an hour for mechanics employed in construction, installation, maintenance, and other technical work.

Individual earnings of the ocean-cable carrier employees included in the study were widely dispersed—the earnings of the middle half of the workers ranged from \$2.04 to \$2.97 an hour. However, individual earnings for most of the occupational groups were narrowly concentrated. Nearly nine-tenths of the cable operators earned between \$2.90 and \$3.10 an hour; over nine-tenths of the foot and bicycle messengers earned between \$1.00 and \$1.30 an hour; and about seven-tenths of the teletype-multiplex operators earned between \$2.10 and \$2.50 an hour.

Total employment of ocean-cable carriers remained virtually unchanged during the year ending October 1959; however, over the 12-year period beginning October 1947, employment declined by 8 percent—from 1,475 to 1,353. Average hourly earnings in the industry have increased steadily since October 1947.

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## Negroes in Apprenticeship, New York State

EDITOR'S NOTE.—This article was excerpted from chapters IV, V, and VI of *Apprentices, Skilled Craftsmen, and the Negro: An Analysis*, published by the New York State Commission Against Discrimination in April 1960. For the sake of brevity, many footnotes citing sources of background material were omitted from the discussion.

THE New York State Commission Against Discrimination has evidenced concern over the problem of Negroes and apprenticeship since its formation in 1945. This study was undertaken to evaluate the status of nonwhites in skilled craft occupations and related apprenticeship training programs in New York State. From the results of the study<sup>1</sup> it appears that, at most, 2 percent of the 15,000 registered apprentices in major programs in the State are Negro. The analysis was also designed to uncover the factors which tend to inhibit the entrance of Negro youth into the skilled trades through apprenticeship programs.

To establish why Negroes are completely excluded from or evidence small participation in major registered apprenticeship programs in the State, sample respondents were asked to list all of the important reasons which they believed were responsible if their firm or committee did not have any or many Negro apprentices.

	Number
Total.....	142
No Negro applicants: few or none apply.....	58
Very few or no Negroes in area.....	23
Few or no Negroes are employed in preapprentice- able occupations.....	8
Information about apprenticeship is not made avail- able to Negroes; Negroes don't hear or know about apprenticeship programs.....	7
Low wages; Negroes want to go into more lucrative, higher prestige employment.....	7
Negroes are not referred by unions.....	6
Negroes lack interest in apprenticeship.....	5
Few apprenticeship openings.....	5
Negroes are not sponsored by journeymen or relatives.....	5
Management will not hire Negroes.....	4
Apprentices are drafted from schools; Negroes are not in schools.....	3
Other responses.....	11

The responses indicate a wide variety of factors which inhibit the entry of Negroes into apprenticeship programs. This is especially true when a number of other factors are taken into consideration and when the full implications of the major stated reason—Negroes do not apply—are examined in detail.

Factors which have great weight in some crafts have little effect or are inoperative in other trades. On the other hand, any one of the factors discussed later is thought to be sufficient to inhibit the participation by some Negro youth in some skilled training programs.

### General Limiting Factors

A number of general factors tend to inhibit the entrance of all youth into various apprenticeship training systems either by limiting the number of available apprenticeship openings or by making employment in apprenticeship relatively unattractive.

*Availability of Other Training Opportunities.* One factor limiting the number of apprentices, both Negro and white, is the status of apprenticeship as a system of skilled craft training. Apprenticeship has been a marginal mode of skilled craft

<sup>1</sup> It was originally contemplated that interviews would be conducted with staff personnel of the New York State Apprenticeship Council and the Federal Bureau of Apprenticeship, Negro and Puerto Rican apprentices, and firms and joint apprenticeship committees actually engaged in indenturing youths. When cooperation from the governmental agencies involved was not forthcoming, interviews with such personnel were dropped. An inability to easily locate Negro and Puerto Rican apprentices and a lack of resources culminated in a decision to abandon this segment of the study. Accordingly, the empirical portion of the study was confined to interviews with key personnel of firms and joint apprenticeship committees in registered apprenticeship programs in New York State. The names and addresses of the firms and joint apprenticeship committees were provided by the Division of Research and Statistics of the New York State Department of Labor, as were the names of the knowledgeable individuals in each program. The list itself is based on records of the Department of Labor as of the third quarter of 1957.

Analysis of the lists showed that the 170 firms and joint apprenticeship committees indenturing 5 or more apprentices employed 77.6 percent of the registered apprentices in the State. The 170 constituted 7.4 percent of all indenturing firms and joint apprenticeship committees. The facility with which interviews could be conducted with this relatively small number of indenturing units, and the assumption that Negroes are more apt to be indentured by units having large labor forces, led to a decision to confine the analysis to units indenturing 5 or more apprentices as of the third quarter of 1957.

As a result, it must be noted that none of the conclusions presented in this analysis pertain to indenturing units holding fewer than 5 apprentices, to units which are not registered with the New York State Apprenticeship Council, or to agencies of the United States Government conducting apprenticeship programs in New York State under provisions of the Civil Service Act. It is thought that no appreciable difference in the pattern of employment of Negro apprentices would issue from an analysis of such units.



preparation in the United States since the advent of the industrial revolution and for Negroes has never been a significant system of skilled craft training. Apprenticeship has offered relatively few skilled training opportunities in New York State except for the period immediately following World War II. Currently, only 4,000 job openings are available in all registered apprenticeship programs each year in the State.

Alternate systems of skilled craft preparation appear to provide greater opportunities for skilled craft training than those held out by formal apprenticeship systems. As a result, most youth will tend to avoid the entire formal apprenticeship structure and seek training opportunities through less formal modes. Quite objectively, Negroes have better opportunities for skilled training entirely outside of registered apprenticeship programs.

*Impact of the Overall Employment Level.* The level of employment in apprenticeship is related directly, if not exactly, to overall levels of employment. Under conditions of full or near-full employment, turnover rates for skilled craftsmen tend to be high. As a result, there is a greater need for training skilled craftsmen, which is partially accomplished through apprenticeship programs. Also, economic growth fosters new and more complex occupations and the need for training new craftsmen through apprenticeship is thereby augmented.

One particular mechanism in the apprenticeship process directly relates the creation of apprenticeship openings to conditions of full employment: trade union policies and practices link the number of apprentices to the number of journeymen. Under such a system, it necessarily follows that if the level of employment of journeymen is high or increasing, the opportunity to employ apprentices will be high or increasing. While there is no exact correlation between the two and the opportunity to employ apprentices is oftentimes not exercised, there is still a greater opportunity to employ apprentices under conditions of full employment than when this is not the case. Conversely, many collective bargaining agreements provide for the inverse or direct separation of apprentices to journeymen during layoff periods. Here, again, the ratio mechanism links apprenticeship opportunities to overall levels of employment.

The higher the objective employment opportunities, the greater the likelihood that Negroes will present themselves for, and possibly achieve, such employment. Also under conditions of full employment, Negro youth can be more selective in seeking jobs, have greater occupational mobility, and receive more occupational information. Their apprenticeship opportunities are accordingly enhanced. Equally important, the resistance of indenturing units to the employment of nonwhites is lessened during periods of high economic activity.

*Restrictive Formulas and Arrangements.* As previously outlined, the formula linking the hiring of apprentices to the employment of journeymen restricts the number of apprentices an employer may hire. Of the sample respondents, 81 reported that they operated under some expression of such a formula. Another 19 worked under some other restricting device, such as an absolute ceiling on the total number of apprentices that could be employed. The ratios varied by trades and ran from a high of 1 apprentice for every 2 journeymen to a low of 1 to 10. The median was 1 to 6. Ratios and other formulas are the expression of craft union attempts to regulate the supply of skilled labor and are ratified by the State Apprenticeship Council through their inclusion in apprenticeship agreements.

Such formulas tend to limit or absolutely prohibit the hiring of apprentices by small or medium sized firms or by departments of large concerns because only small numbers of journeymen are employed. While this may have little effect on a particular employer, the effects on a craftwide and statewide basis may be considerable.

The criteria used to establish a particular ratio are also limiting. Most indenturing units appear to predicate the ratio on the basis of skilled replacement needs alone. It is also clear that few employers hire as many apprentices as union rules permit. Very little, if any, thought is given to the growth needs of a particular firm or the trade as a whole. Again, the effect is tradewide, statewide, and cumulative. It results in fewer apprenticeship openings, part of the incidence falling on aspiring nonwhite craftsmen.

Another impediment is that of seniority systems. In many firms, apprentices are drawn from those already employed, sometimes on a plantwide

but usually on a departmental basis. Consequently, if Negroes do not hold preapprenticeable occupations in particular units of a firm and then meet longevity and other qualifications, it is impossible for them to bid for openings in registered apprenticeship programs.

*Where Negroes Live and Where the Jobs Are.* As indicated earlier, it was the belief of the largest group of the respondents that Negroes did not achieve positions in apprenticeship programs because they did not apply for such opportunities. In amplifying this response, a number of respondents attributed the absence of Negro applicants to the lack of Negroes in the particular area. This was especially true of the respondents in the upstate regions of the Apprenticeship Council, particularly those whose establishments were located outside major urban centers. One respondent, for instance, noted that "there was only one Negro teenager in the area \* \* \* [and] he just left for New York City."

While nonwhites in New York are concentrated almost exclusively in the metropolitan areas of the State, they are disproportionately domiciled in New York City. Thus, apprenticeship opportunities outside the immediate New York City area are not normally accessible to the vast majority of young Negroes. This appears to be particularly true of apprenticeship opportunities in the metal crafts and a number of other industries which have formal training programs.

*Negative Attitudes to Manual Work.* The relative rewards of apprenticeship and skilled craftsmanship, as against other work, must be reviewed as factors which may inhibit the movement of Negroes into the skilled trades. Prominent among these is the invidious evaluation made by Negroes of the entire range of skilled craft occupations. As Ginzberg points out, "the ambitious young Negro is even more likely than the white youth to scorn skilled work and to overestimate the importance of achieving status through white-collar or professional employment."<sup>2</sup> Some Negro youths have relatively unsuccessful parents, and they try to be as unlike their parents as possible. Consequently, Negro youths tend to eschew all manual work, even though such a rejection involves the loss of the relatively high rewards and satisfactions provided by employment in skilled occupations.

Some of the sample respondents noted this tendency. Seven stated their belief that Negroes did not go into apprenticeship programs because they sought "more lucrative, higher prestige" employment. This trend away from all manual occupations is not limited to Negroes but represents a historical movement which permeates American society.

*Low Wages of Apprentices.* Both Negroes and whites may be deterred from entering formal skilled craft training programs by their unfavorable comparison of the psychic and real income levels held out by apprenticeable and alternate occupations. Young Negroes may not have the financial support needed to augment the apprentice wage and sustain them through the early stages of the skilled training period. Similarly, Negro youth frequently must share in the support of the family unit at an early age. Additionally, the background of family poverty may spur the young Negro to reach for a higher income level as soon as possible with little or no regard for the long-run wage factors of any given occupation. Such an occupational outlook is also prevalent among low-income whites, of course, but the deterring factors would appear to culminate with greater force in the case of the Negro.

*Other General Factors.* The seasonal character of employment in some skilled trades may inhibit some youths from undertaking apprenticeship training. As Haber points out, month-by-month employment was found to be the most "... important single explanation as to why boys shunned the building trades and why contractors shunned training them."<sup>3</sup> Because of changes in building construction over the years, this factor may not be as important today as it was in the twenties.

Another possible restricting factor is the length of training for a particular craft job. The term of apprenticeship may be such that aspiring artisans may not be strongly motivated to enter and remain in some apprenticeship programs. This may be especially true when the term has been established to serve the interests of either unions or management and has little or no relationship to the development of skills.

<sup>2</sup> Eli Ginzberg and others, *The Negro Potential* (New York, Columbia University Press, 1955), p. 108.

<sup>3</sup> William Haber, *Industrial Relations in the Building Industry* (Cambridge, Harvard University Press, 1930), p. 134.

### Occupational Choice and Selection

A second group of factors tends to limit the apprenticeship opportunities of Negro youth because of the almost unique characteristic relationship of Negroes to the process of apprenticeship recruitment. Since the processes of occupational choice and selection are analogous for white youth, the factors cannot be categorized as being discriminatory per se. Yet the ultimate effect in the case of Negroes is such that, to all intents and purposes, they are excluded from apprenticeship programs because of their race or color.

These factors are not always operative in all apprentice programs, nor do they have an incidence and effect which cannot be overcome by some Negro youth. The absence of Negroes in large numbers from apprenticeship programs suggests, however, that the processes of occupational choice and selection do have a particularly limiting effect on the vast majority of potentially apprenticeable Negro youth.

*Role of Personal Influences and Models.* Sample respondents were asked to indicate their belief as to how most youths first become interested in apprenticeship training. Their responses are summarized below.

	Number
Total.....	194
Relatives, friends, neighbors, and journeymen.....	95
Secondary schools, including teachers, principals, and counselors.....	37
"On-the-job".....	30
Employers.....	19
Newspapers and other media.....	8
New York State Employment Service.....	3
Veterans Administration.....	2

As indicated, over two-thirds of the respondents emphasized the important role played by primary groups—the family, the neighborhood, the school—in the process of occupational choice. According to the general literature, this choice is effected through the influence of key persons in each of these groupings, i.e., through "models" who offer the adolescent the information, encouragement, and support which is needed to become an apprentice.

Negro youth are seldom exposed to influences which can lead to apprenticeship. Negroes are not apt to have relatives, friends, or neighbors in skilled occupations. Nor are they likely to be in

secondary schools where they receive encouragement and direction from alternate role models. Within the minority community, skilled Negro "models" after whom the Negro youth might pattern himself are rare, while substitute sources which could provide the direction, encouragement, resources, and information needed to achieve skilled craft standing are nonexistent.

In sum, Negroes do not apply for apprenticeship openings because an original interest in skilled craft training is not normally evoked for them by role models in primary groups, and further, other influences lead away from rather than toward the skilled crafts. Moreover, the decisions involved in occupational choice, once made, cannot be amended later in life.

*Learning of an Apprenticeship Opening.* Sample respondents were asked to indicate how they thought most youth learned about specific openings in apprenticeship programs. The numerical distribution of the responses is indicated below.

	Number
Total.....	181
Employers.....	76
Unions.....	31
Relatives and friends.....	46
Secondary schools.....	17
New York State Employment Service and other formal sources.....	11

Youths usually obtain apprenticeship positions because they have influence with a key individual in the apprenticeship selection process. The source of this influence is usually a relative or friend—typically an official of labor or management or an employee of the firm where the indenture is to be carried out—who is in a position to know about the impending vacancy. The relative or friend can not only inform the youth of the time and type of vacancy but also intercede on his behalf with the selecting official. Alternatively, the youth may learn about and apply for an opening because he is currently employed by the indenturing unit and has fulfilled any formal requirements. In either event, the youth obtains the apprenticeship because, succinctly stated, he is at the right place at the right time with the right kind of credentials.

Confirmation of the highly informal nature of apprenticeship recruitment comes from sample respondents. When asked if there were any differences between the official and actual ways of



obtaining an apprenticeship, a number responded in the following typical manner:

Yes, a recommendation from a union member or friend helps.

It depends on who you know.

The employer may ask for a specific person.

The official way is very informal.

A chance arrangement with the shop foreman or union representative.

The effects of the informal nature of the selection of apprentices is compounded by the nonutilization of formal recruitment sources. As indicated earlier, only 11 respondents stated that they thought most youths learned about apprenticeship openings through formal channels of recruitment such as the mass media or the New York State Employment Service. Nonuse of the services of the State Employment Service appears to be in contravention of a specific agreement between that agency and the State Apprenticeship Council. By not utilizing sources such as the State Employment Service, indenturing firms and joint apprenticeship committees necessarily place the burden of recruitment on employee recommendations or other informal modes of recruitment.

During the course of this study, only one instance of the use of the mass media for apprenticeship recruitment came to the attention of the author. Moreover, this particular announcement was required by law.<sup>4</sup> Beyond the lack of information about specific job openings in apprenticeship, the survey of the literature undertaken for this present study revealed that there is virtually a complete blackout about apprenticeship in general. Where such information exists it is usually technical in nature.<sup>5</sup> The lack of information in this connection is apparently the result of governmental policies as well as labor and management practices.<sup>6</sup>

All of the foregoing imposes special barriers in the path of aspiring Negro artisans. Cumulatively, the apprenticeship recruitment process is such that it is remarkable that any Negroes are able to apply for positions in registered apprenticeship programs in New York State.

### Specific Racial Discrimination

Assuming that employment opportunities are available in apprenticeship programs and are deemed attractive by Negro youth, the latter

must still develop an interest in apprenticeship, make the correct preparatory decisions, find a specific job opening, and meet subjective and objective hiring standards to achieve a skilled training opportunity. The same process holds true for white youth, but unlike Negro youth, they do not encounter the additional barrier of discrimination. This impediment specifically inhibits the entrance of Negro youth into apprenticeship programs and is an important causal factor in the constellation of factors which limit the number and proportion of Negroes in the skilled craft segment of the labor force.<sup>7</sup>

Sample respondents were asked: If a qualified Negro youth applied to your firm for an available apprenticeship opening, would he have the same chance to obtain it as an equally qualified white youth? Only nine respondents indicated some resistance to the employment of Negroes. Two graphic arts respondents stated that Negroes would have a similar opportunity only if they were currently employed by them in preapprenticeable occupations. While this is in keeping with the recruitment process in printing, it must also be noted that neither of the firms employed Negroes in preapprenticeable occupations. Another printing respondent stated that he did not believe Negroes would have an equal chance, since "recommendations came from employed relatives and friends," implying that Negroes had neither as a source of recommendation. Another printing respondent predicated an affirmative answer on the ability of a Negro youth "to get by the joint apprenticeship committee . . . and if he was known in the shop."

One tool and die respondent would say only that he "guessed" a Negro would have an equal chance in his apprenticeship program. A second could not state that a Negro would be hired as an apprentice. Still another, apparently completely oblivious of the law against discrimina-

<sup>4</sup> This occurred in connection with the announcement of a civil service examination for 4th class apprentices at the New York Naval Shipyard in Brooklyn. It was carried by a paper which has a commercial interest in the announcement of civil service examinations.

<sup>5</sup> One notable exception is Harry Kursh, *Apprenticeship in America* (New York, W. W. Norton & Co., 1959).

<sup>6</sup> The State Apprenticeship Council has only one publication which can be used for mass distribution. The Federal Bureau of Apprenticeship is somewhat better, but neither use other mass media to any great degree.

<sup>7</sup> Some sample respondents indicated some resistance to the employment of individuals of Italian, Puerto Rican, and American Indian national origin and of the Jewish creed in some apprenticeship programs.



tion, stated that a Negro would not be hired "since the owner preferred Germans for tool and die apprentices" and was actively engaged in recruiting German, as opposed to American, nationals for such openings. Two other respondents were listed as being negative on the question because of active hostility to the survey and its implications.

The foregoing information indicates that most respondents express formal compliance with the law against discrimination and claim that they would have little or no hesitation in hiring qualified Negroes as apprentices if they applied. For the most part, this is probably true. It would, however, be naive in the extreme to expect respondents who were discriminating to indicate that they engaged in such practices to members of a governmental agency seeking to prevent and eliminate discriminatory actions. Moreover, the employment patterns of some of the indenturing units, their previous complaint record with the State Commission Against Discrimination, and some of their verbal responses—which included some patent fabrications—would appear to indicate that some of the responses bore little or no resemblance to actual practice.

*Role of the Commission Against Discrimination.* The New York State Commission Against Discrimination is empowered to eliminate and prevent discrimination based on race, creed, color, or national origin in employment, places of public accommodation, resort, or amusement, and in public and publicly assisted housing through investigation, conciliation, and persuasion. Failure to correct a discriminatory act may lead to a public hearing, the issuance of cease and desist orders, or actions in contempt proceedings before the New York State Supreme Court.

Given such powers, which have been exercised for 15 years, the question arises as to why the conditions described in this study are still extant. One answer to such a query is that the commission is a creature of its organic statute—one which

maximizes the role of individual complaint proceedings as the instrument to achieve the anti-discriminatory goals of the people of the State of New York. The commission, from one view, cannot eliminate and prevent discrimination in apprenticeship save on the complaints of those who are denied apprenticeships because of race, creed, color, or national origin and after a finding of fact to credit such an allegation. Leaving aside the important question of proving discrimination, it still holds that the commission cannot adjust a specific discriminatory act, or rectify a general discriminatory pattern, unless an aggrieved person complains of such an act.

The evidence on this point is clear: few have complained about apprenticeship in the commission's history. Out of more than 6,500 complaints in 15 years, only a minute fraction have raised the issue of discrimination in apprenticeship, either directly or indirectly. The same general situation obtains for skilled craft positions. Less than 10 percent of the employment complaints received by the commission over the years have concerned skilled craft jobs.

It is not surprising that so few apprenticeship cases come to the attention of the commission. Considering the fact that, for one reason or another, Negroes do not apply for apprenticeships it is not likely that they will actively complain about not receiving them. It is also likely that younger people simply do not know that they have the right to file a complaint with the commission. Moreover, the potential complainant faces a combination of union, management, and governmental hierarchies which is undeniably awesome and discouraging. While complaint proceedings represent one valid and useful approach to the issue of discrimination in the apprenticeship field, fundamental and widespread rectification of the conditions described in this report will depend ultimately upon a consensus among management, labor, and government that such changes are necessary and desirable.

## Paid Rest Periods in Major Union Contracts, 1959

PROVISIONS for paid rest periods during regular working hours were included in a fourth of the major collective bargaining agreements in effect in 1959. In about two-thirds of the agreements providing for rest periods, such allowances—often called “relief periods,” “coffee breaks,” or “smoking time”—applied to all employees; in the remaining agreements, coverage was limited to special groups of workers, primarily women. Generally, two rest periods daily were specified.

The prevalence of formal rest period provisions has remained virtually unchanged since 1953, the date of the Bureau of Labor Statistics previous study, when such provisions were found in about 23 percent of the contracts analyzed.<sup>1</sup> It seems reasonable to assume that the practice of providing formal rest periods is more common than the

above figures would indicate. The matter of rest periods may be covered either by plant rules referred to in the agreement but which are not defined or spelled out in detail,<sup>2</sup> or may be governed by longstanding company policy. Legally required rest periods applicable to women workers may also lessen the need for specific contract provisions.<sup>3</sup>

This study is based on an analysis of 1,687 collective bargaining agreements on file in the Bureau of Labor Statistics, each covering 1,000 or more employees, or virtually all agreements of this size in the United States, exclusive of railroads and

<sup>1</sup> See Paid Rest Period Provisions in Union Agreements, 1952-53 (in Monthly Labor Review, May 1954, pp. 531-535), or BLS Bull. 1166 (1954), pp. 15-22.

<sup>2</sup> For example, rest periods are rarely specified in steel industry agreements, but according to reports published during the 1959 strike, provision for them may be encompassed within “local working conditions.”

<sup>3</sup> The following 12 States have laws relating to rest periods for women workers, most of which provide for a 10-minute rest period within each half of the day: Alaska, Arizona, California, Colorado, Kentucky, Nevada, New York, Oregon, Pennsylvania, Utah, Washington, and Wyoming.

TABLE 1. EMPLOYEES COVERED BY PAID REST PERIOD PROVISIONS

Industry	Number studied		Number with paid rest period provisions		Employee coverage			
					All employees		Women only	
	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)
All industries.....	1,687	7,477.3	433	1,683.1	288	1,154.7	47	147.0
Manufacturing.....	1,063	4,555.3	288	969.9	194	822.4	30	97.0
Ordnance and accessories.....	15	39.4	9	26.0	7	17.7	—	—
Food and kindred products.....	120	405.8	61	261.4	47	218.0	5	14.8
Tobacco manufactures.....	11	27.6	1	1.1	—	—	—	—
Textile mill products.....	33	78.4	6	10.9	—	—	—	—
Apparel and other finished products.....	45	464.1	—	—	—	—	—	—
Lumber and wood products, except furniture.....	13	37.2	4	6.6	4	6.6	—	—
Furniture and fixtures.....	20	32.1	6	8.2	4	4.5	—	—
Paper and allied products.....	54	118.0	17	55.5	7	9.3	8	32.7
Printing, publishing, and allied industries.....	31	62.2	2	2.5	1	1.2	1	1.4
Chemicals and allied products.....	57	113.6	21	42.5	13	19.3	4	15.3
Petroleum refining and related industries.....	23	63.8	2	2.7	1	1.6	—	—
Rubber and miscellaneous plastics products.....	24	128.1	8	15.7	7	14.1	—	—
Leather and leather products.....	20	62.5	1	1.3	1	1.3	—	—
Stone, clay, and glass products.....	38	100.8	12	34.1	6	7.7	2	12.8
Primary metal industries.....	124	724.8	6	15.4	—	—	—	—
Fabricated metal products.....	52	146.4	15	60.9	11	36.3	1	1.2
Machinery, except electrical.....	117	283.9	24	50.1	15	34.4	3	6.5
Electrical machinery, equipment, and supplies.....	100	438.3	40	120.8	36	107.6	1	1.2
Transportation equipment.....	127	1,152.2	39	234.4	24	128.9	3	8.3
Instruments and related products.....	24	54.2	7	10.7	4	6.0	1	1.5
Miscellaneous manufacturing.....	15	22.5	7	9.4	5	7.4	—	—
Nonmanufacturing.....	624	2,922.0	145	713.2	94	532.3	17	50.1
Mining, crude petroleum, and natural gas production.....	17	252.7	1	1.5	—	—	1	1.5
Transportation <sup>1</sup> .....	95	573.2	8	47.3	6	43.1	—	—
Communications.....	79	558.1	46	373.3	34	318.8	—	—
Utilities: Electric and gas.....	78	200.5	2	9.4	—	—	1	1.9
Wholesale trade.....	12	21.6	3	3.6	1	1.0	—	—
Retail trade.....	92	245.1	52	155.9	37	109.1	11	36.2
Hotels and restaurants.....	36	176.8	6	31.7	1	6.0	3	8.0
Services.....	55	184.9	18	50.2	10	28.8	—	—
Construction.....	155	701.9	8	38.0	5	25.6	—	—
Miscellaneous nonmanufacturing.....	5	7.4	1	2.5	—	—	1	2.5

<sup>1</sup> Includes agreements which provided for rest periods during the summer months only, those with different provisions for male and female employees,

and those limiting rest periods to employees at designated stations or locations.

airlines.<sup>4</sup> The 7.5 million workers covered by these agreements represented somewhat less than half of all workers estimated to be under agreement in the United States, exclusive of railroad and airline agreements. Of the agreements studied, 1,063, covering over 4.5 million workers, were in manufacturing, and 624 agreements, with slightly more than 2.9 million workers, were in nonmanufacturing industries. All of the agreements were in effect in 1959; half were scheduled to expire during that year.

### Prevalence of Provisions

A fourth (25.6 percent) of the 1,687 agreements analyzed provided paid time for short periods away from the job for purposes of rest or relaxation (table 1). These agreements covered less

<sup>4</sup> Agreements for the railroad and airline industries are not collected by the Bureau and, therefore, are not included in this study.

than a fourth (22.5 percent) of all workers in the study, but not all workers under these agreements were eligible for rest periods.

Provisions for rest periods were not specified in any of the major agreements in the apparel industry and were rarely included in the following manufacturing industries: tobacco, printing, petroleum refining, leather, and primary metals. Low representation was also noted in the nonmanufacturing industries of mining, transportation, electric and gas utilities, and construction. Among the industries in which paid rest period provisions were most prevalent were food products, electrical machinery, transportation equipment, communications, and retail trade.

In about two-thirds (288) of the agreements with provisions on the subject, all employees in the bargaining unit were uniformly entitled to rest periods. In 102 agreements, rest periods were limited to special groups, generally women,

UNDER MAJOR COLLECTIVE BARGAINING AGREEMENTS, BY INDUSTRY, 1959

Employee coverage—Continued										Industry
Designated departments only		Designated occupations only		Continuous operations only		Other <sup>1</sup>		Coverage not clear <sup>1</sup>		
Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	
13	48.2	23	78.1	5	7.5	14	95.2	43	152.5	All industries.
4	6.8	8	34.7	5	7.5	10	68.5	37	133.0	Manufacturing.
2	3.0	3	11.0	1	1.5	2	10.2	2	8.3	Ordinance and accessories.
						1	1.1	1	3.0	Food and kindred products.
								4	8.6	Tobacco manufactures.
										Textile mill products.
										Apparel and other finished products.
				1	2.5	1	11.0	2	3.8	Lumber and wood products, except furniture.
										Furniture and fixtures.
										Paper and allied products.
						1	1.2	3	6.8	Printing, publishing, and allied products.
						1	1.1			Chemicals and allied products.
									1.6	Petroleum refining and related industries.
										Rubber and miscellaneous plastics products.
						2	11.0	2	2.7	Leather and leather products.
1	1.5	1	1.7					4	12.2	Stone, clay, and glass products.
						1	20.0	2	3.4	Primary metal industries.
1	2.3	1	1.0					4	6.0	Fabricated metal products.
		1	6.0	1	1.5			1	4.5	Machinery, except electrical.
		2	15.0	1	1.0	1	13.0	1	68.2	Electrical machinery, equipment, and supplies. <sup>2</sup>
								2	3.2	Transportation equipment.
				1	1.0			1	1.0	Instruments and related products.
										Miscellaneous manufacturing.
9	41.4	15	43.4			4	26.7	6	19.5	Nonmanufacturing.
										Mining, crude petroleum, and natural gas production.
1	1.4							1	2.8	Transportation. <sup>3</sup>
4	26.4	5	17.2			1	6.7	2	4.4	Communications.
		1	7.5							Utilities: Electric and gas.
		1	1.5					1	1.1	Wholesale trade.
		3	8.0					1	2.7	Retail trade.
1	9.2							1	8.5	Hotels and restaurants.
3	4.5	3	5.4			2	11.5			Services.
		2	3.9			1	8.5			Construction.
										Miscellaneous nonmanufacturing.

<sup>1</sup> Includes agreements with such statements as "present practice to be continued" and "employees now allowed rest periods shall continue to receive them."

<sup>2</sup> Excludes railroad and airline industries.

NOTE: Because of rounding, sums of individual items may not equal totals.

TABLE 2. TOTAL DAILY TIME ALLOWANCE FOR PAID REST PERIODS UNDER

Industry	Number with paid rest period provisions		Duration not indicated		Total daily time allowance					
					Under 10 minutes		10 minutes		15 minutes <sup>1</sup>	
	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)
All industries.....	433	1,683.1	94	298.1	6	10.2	31	81.4	17	65.1
Manufacturing.....	288	969.9	66	214.5	3	4.0	27	55.0	14	37.3
Ordnance and accessories.....	9	26.0	2	8.3			2	3.4		
Food and kindred products.....	61	261.4	13	61.1					2	4.5
Tobacco manufactures.....	1	1.1					1	1.1		
Textile mill products.....	6	10.9	5	9.6						
Apparel and other finished products.....										
Lumber and wood products, except furniture.....	4	6.6								
Furniture and fixtures.....	6	8.2	1	2.4			1	1.0		
Paper and allied products.....	17	55.5	3	7.6					4	7.2
Printing, publishing, and allied industries.....	2	2.5								
Chemicals and allied products.....	21	42.5	1	3.7						
Petroleum refining and related industries.....	2	2.7					1	1.1		
Rubber and miscellaneous plastics products.....	8	15.7	1	1.6						
Leather and leather products.....	1	1.3								
Stone, clay, and glass products.....	12	34.1	8	19.2					1	2.8
Primary metal industries.....	6	15.4	4	12.2			1	1.5		
Fabricated metal products.....	15	60.9	5	8.7			2	2.9	1	1.1
Machinery, except electrical.....	24	50.1	7	9.1	2	2.9	9	17.1	1	13.9
Electrical machinery, equipment, and supplies.....	40	120.8	3	6.8			2	2.5	3	4.3
Transportation equipment.....	39	234.4	9	59.0	1	1.1	6	22.0	2	3.6
Instruments and related products.....	7	10.7	3	4.2			1	1.4		
Miscellaneous manufacturing.....	7	9.4	1	1.0			1	1.1		
Nonmanufacturing.....	145	713.2	28	83.6	3	15.2	4	26.4	3	27.8
Mining, crude petroleum, and natural gas production.....	1	1.5								
Transportation.....	8	47.3	2	6.8			1	3.0		
Communications.....	46	373.3	5	18.6					1	10.3
Utilities: Electric and gas.....	2	9.4								
Wholesale trade.....	3	3.6	1	1.1						
Retail trade.....	52	155.9	14	41.5						
Hotels and restaurants.....	6	31.7	2	9.7						
Services.....	18	50.2	3	4.7			1	13.0	2	11.5
Construction.....	8	38.0	1	1.3	3	15.2	2	10.4		
Miscellaneous nonmanufacturing.....	1	2.5								

<sup>1</sup> Includes 3 agreements with a total of 14 minutes and 1 with 16 minutes.<sup>2</sup> Includes 1 agreement with a total of 21 minutes, 2 with 24 minutes, and 4 with 25 minutes.<sup>3</sup> Includes 2 agreements with a total of 35 minutes, 5 with 40 minutes, and 1 with 90 minutes.

to employees in designated departments or occupations, or to workers on continuous operations or on hazardous jobs. The following clauses illustrate such limitations:

Women employees of the company shall receive a rest period of 10 minutes each half day, during which they shall be free to leave their work places.

\* \* \*

... there shall be no interruption of production for smoking or lunch, except that employees working in restricted areas shall be allowed a 5-minute smoking period each half shift. . . .

\* \* \*

All employees on continuous operations are to receive, individually, a rest period of 10 minutes before and after lunch.

\* \* \*

Under exceptional conditions of hazardous or fatiguing work, reasonable provision will be made for rest periods for employees engaged in such work.

In 43 agreements, the employee coverage was not clear; the provision usually stated that present practices were to be continued. A few stipulated that rest periods were to be negotiated at the local plants or that "reasonable" or "adequate" rest periods were to be allowed or granted "when practical."

### Duration

Although the total duration of rest periods ranged from 5 to 90 minutes per day, 157 of the 339 agreements with maximum time limits granted 20 minutes (table 2). The next largest number of agreements (91) provided for a daily total of 30 minutes. Virtually all of the agreements in the telephone industry which defined the duration of rest periods were in this latter category. Only



## MAJOR COLLECTIVE BARGAINING AGREEMENTS, BY INDUSTRY, 1959

Total daily time allowance—Continued										Industry
20 minutes		Over 20 and under 30 minutes <sup>1</sup>		30 minutes		Over 30 minutes <sup>1</sup>		Varies by sex and occupation		
Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	
157	621.4	7	10.3	91	510.3	8	16.4	22	61.2	All industries.
120	506.2	7	10.3	38	116.9	4	8.8	9	17.2	Manufacturing.
5	14.3									Ordinance and accessories.
24	146.0	1	2.5	16	35.4	2	5.4	3	6.5	Food and kindred products.
				1	1.3					Tobacco manufactures.
4	6.6									Textile mill products.
4	4.9									Apparel and other finished products.
4	32.3	1		3	4.0			3	4.5	Lumber and wood products, except furniture.
1	1.4	1	1.2							Furniture and fixtures.
10	22.6	2	2.8	8	13.5					Paper and allied products.
1	1.6									Printing, publishing, and allied industries.
6	12.9	1	1.2							Chemicals and allied products.
1	1.3									Petroleum refining and related industries.
2	2.1			1	10.0					Rubber and miscellaneous plastics products.
						1	1.7			Leather and leather products.
2	3.5			4	43.4			1	1.4	Stone, clay, and glass products.
4	5.0			1	2.2					Primary metal industries.
27	96.7	1	1.0	1	2.9	1	1.7	2	4.8	Fabricated metal products.
17	142.9		1.7	3	4.2					Machinery, except electrical.
3	5.1									Electrical machinery, equipment, and supplies.
5	7.3									Transportation equipment.
37	115.2			53	393.4	4	7.6	13	44.0	Instruments and related products.
										Miscellaneous manufacturing.
1	1.5									Nonmanufacturing.
1	1.4			4	36.1					Mining, crude petroleum, and natural gas production.
2	4.2			36	311.9			2	22.4	Transportation. <sup>1</sup>
				2	9.4					Communications.
1	1.5			2				1	1.0	Utilities: Electric and gas.
20	66.9			9	31.0			9	16.6	Wholesale trade.
4	22.0									Retail trade.
7	9.4					4	7.6	1	4.0	Hotels and restaurants.
1	8.5			1	2.6					Services.
				1	2.5					Construction.
										Miscellaneous nonmanufacturing.

<sup>1</sup> Excludes railroad and airline industries.

NOTE: Because of rounding, sums of individual items may not equal totals.

a few agreements provided for rest periods of more than 30 minutes or less than 10.

In 22 contracts, the daily time allowance varied for men and women or by occupation. In nine retail trade agreements, a 20-minute allowance was permitted all employees except those in departments where the "established practice was 15." One agreement in the food industry provided "two 10-minute break periods in all departments except women on ovens who are allowed three 15-minute breaks." Another contract in that industry provided for two 10-minute rest periods except "continuous enrober belt and candy-packing belt operators who receive the equivalent of a 5-minute rest period each 40 minutes of work."

The length of the rest period was not indicated in slightly more than a fifth of the agreements.

Many of these were also vague on other details, as the following clause illustrates:

The duration of the relief period or spell out time as is in practice at present in each gang at each plant will be continued unless, as result of local collective bargaining, such duration shall be changed.

Employees will be allowed two rest periods in accordance with written agreements to be negotiated on a local basis.

### Number, Timing, and Scheduling

Most commonly, the agreements specified two rest periods of 10 or 15 minutes daily, one in each half of the shift (tables 3 and 4). Where a single break per day was specified, it was usually to be taken during the first half shift.

In 200 agreements which contained references to scheduling, the details were frequently left to

TABLE 3. NUMBER AND TIMING OF DAILY PAID REST PERIODS UNDER MAJOR COLLECTIVE BARGAINING AGREEMENTS, BY METHOD OF SCHEDULING, 1959

[Workers in thousands]

Method of scheduling	Number with paid rest period provisions		Number and timing not specified <sup>1</sup>		Number and timing of daily rest periods												Other <sup>2</sup>	
					1 rest period						2 rest periods							
					1st half of shift		2d half of shift		Timing not indicated		1st and 2d half shifts		Timing not indicated					
	Agreements	Workers	Agreements	Workers	Agreements	Workers	Agreements	Workers	Agreements	Workers	Agreements	Workers	Agreements	Workers				
Total with provisions.....	433	1,683.1	73	202.9	22	75.5	4	14.1	15	51.5	264	1,138.0	29	135.0	26	66.3		
Total with specified method.....	200	885.9	6	9.2	14	40.0	3	11.6	8	14.1	149	745.3	10	41.0	10	24.9		
By mutual agreement.....	18	51.6	5	7.7	1	1.0			3	3.9	5	23.0	3	14.2	1	1.8		
Company to determine time.....	52	154.9			3	6.5	1	1.5	1	1.1	36	104.9	6	24.3	5	16.7		
At times consistent with operation requirements.....	10	24.4					1	1.1	2	4.5	6	17.8			1	1.0		
Staggered so as not to interfere with production.....	6	31.9									6	31.9						
Within specified periods after start and/or before end of shift.....	18	129.9			1	9.9	1	9.0			16	111.0						
After less than 2 hours' work <sup>3</sup> .....	5	11.9			2	4.0					3	7.9						
After 2 hours' work.....	40	215.8			3	11.1					36	202.3	1	2.6				
After 3 hours' work.....	3	4.7			1	1.7					2	3.0						
After more than 3 hours' work <sup>4</sup> .....	3	6.1							2	4.6	1	1.5						
Other <sup>5</sup> .....	45	234.7	1	1.5	3	5.8					38	242.1			3	5.4		
Total with no reference to scheduling....	233	797.4	67	193.7	8	35.6	1	2.5	7	37.4	115	392.9	19	94.0	16	41.4		

<sup>1</sup> Agreements contained reference to rest periods but number of periods and timing either were not clear or not indicated.<sup>2</sup> Includes 16 agreements which provided 2 rest periods and 9 in which the number of rest periods was not clear but the timing in both groups usually varied according to sex, work requirement, department, or occupation; an additional agreement specified 3 rest periods.<sup>3</sup> Includes agreements which provided rest periods within a range of 1 to 1 1/4 hours after starting time.<sup>4</sup> Includes 1 agreement which provided that rest periods were to be taken at intervals of not less than 4 hours, 1 agreement which provided a rest period

after 4 1/2 consecutive hours' work, and 1 agreement which provided rest periods when "uninterrupted work" exceeded 4 hours.

<sup>5</sup> Includes agreements with provisions which usually referred to continuation of present practices; also includes 1 agreement which provided for rest periods "in the morning," 1 agreement which provided rest periods at "reasonable intervals following the beginning and prior to the end of work period in each half shift," and another in which scheduling was a matter of local plant option.

NOTE: Because of rounding, sums of individual items may not equal totals.

TABLE 4. NUMBER AND DURATION OF DAILY PAID REST PERIODS UNDER MAJOR COLLECTIVE BARGAINING AGREEMENTS, BY EMPLOYEES COVERED, 1959

Number of daily periods and duration	Number with paid rest period provisions		Employees covered			
	Agreements	Workers (thousands)	All employees		Specific groups <sup>1</sup>	
			Agreements	Workers (thousands)	Agreements	Workers (thousands)
Total with provision.....	433	1,683.1	288	1,154.7	145	528.4
Number and duration not clear <sup>2</sup> .....	73	202.9	20	41.9	53	161.0
1 period; duration not indicated.....	6	1.0	1	1.0		
1 period; under 10 minutes.....	6	19.2	6	19.2		
1 period; 10 minutes.....	22	64.8	18	57.6	4	7.2
1 period; 15 minutes.....	10	53.7	3	18.4	7	35.4
1 period; 20 minutes.....	2	2.4	2	2.4		
2 periods; duration not indicated.....	9	36.1	8	30.9	1	5.2
2 periods; 5 minutes each.....	9	18.6	7	13.2	2	3.4
2 periods; over 5 but under 10 minutes each.....	4	6.1	4	6.1		
2 periods; 10 minutes each.....	154	617.8	119	444.8	35	173.0
2 periods; over 10 but under 15 minutes each.....	2	2.9	2	2.9		
2 periods; 15 minutes each.....	89	501.7	57	395.3	32	106.4
2 periods; 20 minutes each.....	4	7.6			4	7.6
2 periods; duration varies by sex.....	1	1.0	1	1.0		
2 periods; duration varies by occupation.....	8	40.5	7	37.6	1	2.9
2 periods; other <sup>3</sup> .....	29	81.6	26	98.3	3	13.4
3 periods.....	1	1.7			1	1.7
Other <sup>4</sup> .....	9	25.7	7	14.4	2	11.3

<sup>1</sup> Includes 43 agreements in which employee coverage was not clear.<sup>2</sup> Includes 1 agreement which allowed a total of 20 minutes daily and 2 which allowed a total of 30 minutes daily.<sup>3</sup> Includes 13 agreements which specified that present practices would continue, 5 agreements which differed the length of rest periods for the morning and afternoon, and 8 agreements which contained a variety of other provisions.<sup>4</sup> Includes agreements in which the number of rest periods and duration differed by department, occupation, work requirement, travel time, and so forth.

NOTE: Because of rounding, sums of individual items may not equal totals.

the discretion of the company or were to be arranged so as not to interfere with production or operation requirements. Such a method of scheduling was set forth in an agreement which granted a maximum of three rest periods to specific groups of workers:

Rest periods shall be taken so as to not interfere with production or continuous operation of work groups, and shall be limited to one 10-minute rest period per full shift, which shall be taken at designated times or as otherwise scheduled by supervision.

However, for dayworkers in the cutting, finishing, rewinder and roll, box shop, and storehouse and loading departments only, working regular dayworker schedules (7:00 a.m. to 12:00 noon and 1:00 p.m. to 4:00 p.m.) on repetitive operating jobs in the above departments, the company will recognize not more than 3 such 10-minute rest periods per full shift.

In 40 agreements, a rest period was scheduled after 2 hours had been worked. In virtually all of these agreements, two rest periods per day were specified.

Under the terms of 18 agreements, such breaks were scheduled within specified periods after the start and/or before the end of the shift:

All employees, shift and day workers, will receive smoking, rest, or lunch periods in accordance with the following schedule. . . .

Shift workers, 1st shift—7:00 a.m. to 3:00 p.m.:

1st rest period—10 minutes (between 9:00 a.m. and 10:00 a.m.)

2d rest period—10 minutes (between 12:00 noon and 1:00 p.m.)

\* \* \*

Except as otherwise specified . . . an employee shall be assigned one 15-minute relief in each session not less than 45 minutes from the start or end of the session.

Although 45 agreements referred only in general to the method of scheduling, such as rest periods at "any time" or "in the same manner and under the same circumstances as before," 233 contracts, covering nearly 800,000 workers, made no reference whatsoever to this matter. Included in this group were 67 agreements which also failed to specify the number and timing of rest periods. Such breaks, it would appear, can be handled informally and may not require the degree of detail found in other collective bargaining areas. The lack of scheduling provisions was most common in the following industries: food, textile mill products, stone, clay, and glass, machinery, trans-

portation equipment, instruments and related products, primary metals, and retail trade.

Where two rest periods were provided, they were usually of equal length (table 4). In the few cases where they were of unequal duration, the longer period occurred in the morning.

Two rest periods shall be allowed without deduction of pay at regular times in each shift to be mutually agreed upon by the employer and the union; a.m., 15 minutes; p.m., 10 minutes.

### Other Regulations

Rest period regulations other than those governing timing, duration, or scheduling were infrequently incorporated in the agreements. Thus, provisions for disciplinary action or revocation of rest period privileges in case of abuse were found in 26 agreements, and rules requiring employees to remain on the premises or to go to special areas were found in 39 agreements.

In addition to time mentioned above [10 minutes], an allowance will be given for travel time from the work area to an approved smoking area and return, this time not to exceed 5 minutes for each smoking period. . . . This privilege, if abused, may be withdrawn at any time after such abuse has been called to the attention of the union and has not been satisfactorily corrected.

\* \* \*

Employees are granted the privilege of eating a sandwich, drinking milk or other soft drink, or taking a smoke (in place provided) during working hours, but it is agreed that this privilege shall not be abused. If it is determined by mutual agreement between management and the union that this privilege is being abused, it shall be withdrawn either from the individual, department, or entire group.

\* \* \*

A warning bell shall be sounded 1 minute prior to the expiration of each rest period and employees shall be at their places of work on the expiration of said rest periods.

The provisions for rest periods as herein set out are agreed to by the company upon the understanding that the employees assume responsibility for return to their places of work by the expiration of the specified rest period, and if such privilege is abused by the employees to such extent that the same cannot be enforced by individual discipline, the company will call the matter to the attention of the Labor Relations Board [a joint labor-management grievance committee] in writing, and if such abuses continue 5 working days after such board has received such notice, the company may discontinue rest periods for any shift or department for such time as the company may deem proper.

—DENA G. WEISS AND ERNESTINE M. MOORE  
Division of Wages and Industrial Relations

## Paid Time for Washup, Cleanup, and Clothes Change in 1959

THE PREVALENCE of pay for washup, cleanup, or clothes-changing time during regular working hours has remained relatively unchanged since 1953. A recent Bureau of Labor Statistics study of 1,687 major collective bargaining agreements in effect in 1959 revealed that only about 17 percent, the same proportion as found in an earlier study,<sup>1</sup> contained specific provisions for paid time for washing up, changing clothes, cleaning up the machine or workplace, or related activities involved in leaving the job for lunch or for the day. Many of these provisions applied only to employees in designated occupations or departments, not to all employees in the bargaining unit.

These cleanup activities are essentially job-related functions. The absence of an agreement

provision may mean that the worker is expected to perform these functions on his own time. However, it is reasonable to assume that informal arrangements are widespread and that, in this area, the prevalence of agreement provisions is not an accurate measure of the extent of the practice.

Washup time and clothes-change time are self-explanatory terms. Cleanup time, for purposes of this study, was defined to cover preparatory and cleanup activities involving the workplace at the beginning or end of the workday, such as checking out and returning tools to the tool crib, arranging the work area, and making out reports required by management.

<sup>1</sup> For data on paid time for washup, cleanup, and clothes change in union agreements in 1953, see Paid Time for Washup, Cleanup, and Clothes Change, 1952-53 (in Monthly Labor Review, April 1954, pp. 420-423), or BLS Bull. 1166, 1954, pp. 14-17.

TABLE 1. PROVISIONS FOR PAID WASHUP, CLEANUP,<sup>1</sup> AND CLOTHES-CHANGE

Industry	Number studied		Number providing paid washup, cleanup, and clothes-change time		Type of provision			
					Washup only		Cleanup only	
	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)
All industries.....	1,687	7,477.3	278	864.8	112	265.3	80	281.5
Manufacturing.....	1,063	4,555.3	216	633.6	104	233.3	43	142.3
Ordnance and accessories.....	15	39.4	5	15.4	3	10.3		
Food and kindred products.....	120	405.8	27	115.3	1	1.0	4	10.3
Tobacco manufactures.....	11	27.6	2	2.4			2	2.4
Textile mill products.....	33	78.4	2	9.6	2	9.6		
Apparel and other finished products.....	45	464.1						
Lumber and wood products, except furniture.....	13	37.2						
Furniture and fixtures.....	20	32.1	2	2.4	2	2.4		
Paper and allied products.....	54	118.0	7	21.7	5	8.6		
Printing, publishing, and allied industries.....	31	62.2	1	7.5	1	7.5		
Chemicals and allied products.....	57	113.6	20	30.0	10	16.6	2	2.7
Petroleum refining and related industries.....	23	63.8	11	24.3	1	1.1	6	16.4
Rubber and miscellaneous plastics products.....	24	128.1	5	37.6	2	2.4	1	1.8
Leather and leather products.....	20	62.5	2	2.5	2	2.5		
Stone, clay, and glass products.....	38	100.8	8	38.9	2	2.9	5	34.6
Primary metal industries.....	124	724.8	7	10.2	3	3.9	1	2.0
Fabricated metal products.....	52	146.4	12	27.4	8	14.8	1	2.4
Machinery, except electrical.....	117	283.9	28	47.8	22	40.4	3	4.1
Electrical machinery, equipment, and supplies.....	100	438.3	26	75.8	18	37.3	3	16.6
Transportation equipment.....	127	1,152.2	44	145.3	18	58.9	14	47.8
Instruments and related products.....	24	54.2	5	17.6	2	11.2	1	1.4
Miscellaneous manufacturing.....	15	22.5	2	2.2	2	2.2		
Nonmanufacturing.....	624	2,922.0	62	231.3	8	32.0	37	139.2
Mining, crude petroleum, and natural gas production.....	17	282.7	1	1.5			1	1.5
Transportation <sup>1</sup> .....	95	573.2	21	72.9	1	1.4	17	62.2
Communications.....	79	858.1	1	1.3				
Utilities: Electric and gas.....	78	200.5	3	8.9			2	5.4
Wholesale trade.....	12	21.6						
Retail trade.....	92	245.1	6	30.0	2	3.5	3	18.0
Hotels and restaurants.....	36	176.8	1	4.3				
Services.....	55	184.9						
Construction.....	155	701.9	29	112.4	5	27.2	14	52.2
Miscellaneous nonmanufacturing.....	5	7.4						

<sup>1</sup> Refers to cleanup activities involving machinery or workplace such as the preparation of the workplace for the following day, returning tools to

the tool crib, or the preparation of reports. In contrast, washup and clothes change refer to personal cleanup.



## Scope of Study

This study was based on 1,687 collective bargaining agreements, each covering 1,000 or more workers, or virtually all agreements of this size in the United States, exclusive of railroads and airlines.<sup>2</sup> The approximately 7.5 million workers covered by these major agreements account for slightly less than half of all workers estimated to be covered by all collective bargaining agreements in the United States, exclusive of railroads and airlines. Of the agreements studied, 1,063 covered 4.5 million workers in manufacturing establishments and 624 applied to 2.9 million workers in nonmanufacturing establishments. All of the agreements were in effect at the beginning of 1959, and slightly less than half (823) expired during that year.

<sup>2</sup> The Bureau does not maintain a file of railroad and airline agreements; hence their omission from this study.

## Prevalence of Agreement Provisions

Provisions relating to paid time for personal washup, changing of clothes, and machine or workplace cleanup, or for a combination of these activities, were found in 278 agreements, covering 865,000 workers, or 17 percent of the major agreements analyzed (table 1). Such provisions were contained in about one-fifth of the contracts in manufacturing and about one-tenth in nonmanufacturing industries, and were relatively most prevalent in food, petroleum, chemicals, transportation equipment, ordnance, and machinery. In none of these industries, however, did the incidence of such provisions exceed half of the major agreements studied.

A single work activity only was covered in 200 agreements. Two types of activity were covered in 72 contracts; more than half of these were in food, transportation equipment, and construction

TIME UNDER MAJOR COLLECTIVE BARGAINING AGREEMENTS, BY INDUSTRY, 1959

Type of provision—Continued										Industry
Clothes change only		Washup and clothes change		Cleanup and clothes change		Washup and cleanup		Washup, cleanup, and clothes change		
Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	
8	24.8	18	62.4	18	96.0	36	122.8	6	12.2	All industries.
6	12.0	15	53.2	18	96.0	25	85.7	5	11.2	Manufacturing.
4	9.3	1	2.1	16	92.5			1	3.0	Ordnance and accessories.
		2	2.2							Food and kindred products.
										Tobacco manufactures.
										Textile mill products.
										Apparel and other finished products.
										Lumber and wood products, except furniture.
										Furniture and fixtures.
		1	11.0			1	2.2			Paper and allied products.
2	2.7	5	6.8			1	1.3			Printing, publishing, and allied industries.
						3	4.7			Chemicals and allied products.
						1	30.0	1	2.5	Petroleum refining and related industries.
										Rubber and miscellaneous plastics products.
										Leather and leather products.
		1	1.5			1	1.4			Stone, clay, and glass products.
		1	6.0	1	2.5	1	1.7			Primary metal industries.
						2	2.4			Fabricated metal products.
		3	15.6			2	6.3	1	1.0	Machinery, except electrical.
		1	8.0	1	1.6	2	28.2	1	1.5	Electrical machinery, equipment, and supplies.
						2	5.0			Transportation equipment.
										Instruments and related products.
										Miscellaneous manufacturing.
2	12.8	3	9.2			11	37.1	1	1.0	Nonmanufacturing.
										Mining, crude petroleum, and natural gas production.
						3	9.4			Transportation. <sup>1</sup>
		1	3.5			1	1.3			Communications.
										Utilities: Electric and gas.
										Wholesale trade.
1	8.5									Retail trade.
1	4.3									Hotels and restaurants.
										Services.
		2	5.7			7	26.4	1	1.0	Construction.
										Miscellaneous nonmanufacturing.

<sup>3</sup> Excludes railroad and airline industries.

NOTE: Because of rounding, sums of individual items may not equal totals.

TABLE 2. PROVISIONS FOR PAID WASHUP, CLEANUP, AND CLOTHES-CHANGE TIME UNDER MAJOR COLLECTIVE BARGAINING AGREEMENTS, BY EMPLOYEE COVERAGE, 1959

[Workers in thousands]

Employee coverage	Type of provision					
	Washup		Cleanup		Clothes change	
	Agreements	Workers	Agreements	Workers	Agreements	Workers
Total studied.....	1,687	7,477.3	1,687	7,477.3	1,687	7,477.3
Number with provisions.....	172	462.6	140	512.4	50	195.3
All employees.....	118	306.3	80	290.0	30	136.3
Employees in designated occupations or departments.....	49	117.3	58	189.4	18	54.1
Other <sup>1</sup> .....	5	39.0	2	33.0	2	5.0
Number with no provisions.....	1,515	7,014.7	1,547	6,964.9	1,637	7,282.0

<sup>1</sup> Present practice was to continue in 3 agreements containing washup provision, in 1 providing for clothes change, and in 1 allowing for machinery and/or work-station cleanup. Details for the remaining 4 agreements were to be negotiated at the local level.

NOTE: Because of rounding, sums of individual items may not equal totals.

industries. All three activities were mentioned in only six agreements.

**Paid Washup Time.** Of the 278 agreements with provisions for paid washup, cleanup, and clothes change, 112 allowed paid washup periods only. However, washup time was also referred to in 60 agreements with provisions for cleanup or clothes change or both (table 1).

In the main, washup time applied to all employees covered by the agreement, but 49 contracts limited the provisions to designated jobs or occupations and 5 did not specify the coverage. (See table 2.) Typical of the provisions that limited coverage are the following illustrations:

... showers on company time will be authorized for employees who are required to work on extremely dirty jobs or with hazardous materials requiring protective clothing or showers ...

Employees on spray gun and sandblast work will be permitted to leave the job 15 minutes prior to quitting time in order to bathe.

A specific amount of time for washup was provided in 94 agreements, granting, most commonly, either 5 (28 agreements) or 10 minutes per day (46 agreements) for this purpose (table 3). Of the 5 agreements with a daily allowance in excess of 15 minutes, 1 allowed 18, 3 allowed 20, and 1 allowed 30 minutes.

In 25 agreements, time allowances varied by occupation or department; fifteen other agree-

ments stipulated that "reasonable," "sufficient" or the "time necessary" for washup would be given:

Except for jobs set forth in exhibit F . . . all employees shall be permitted to stop work to wash up 6 minutes before quitting time at the lunch period and at the end of the shift. The employees in the jobs set forth in said exhibit F shall be permitted to stop work to wash up 10 minutes before quitting time at the lunch period and at the end of the shift.

The company will continue its practices of allowing a reasonable amount of time for necessary washup and/or clothes change.

In a number of agreements, the amount of time allowed could be used for more than one type of activity, as illustrated below:

A 5-minute washup period shall precede the quitting time of each shift. During this period, employees shall be permitted to cease work for the purpose of washing up and taking care of their tools.

Employees on jobs which require toxic clothing and a bath . . . shall be allowed to leave their job 15 minutes before quitting time in order to return clothing to the Service Department and take a bath.

Under the terms of 76 agreements, employees were allowed a single washup period, usually at the end of the shift. Many of the agreements in the chemical, machinery (except electrical), electrical machinery, and transportation equipment industries provided for this type of scheduling.

A 15-minute washup period on company time shall be allowed to employees . . . when handling skin-irritating materials or lead compounds. This time shall be taken before the regularly scheduled quitting time . . .

Employees in the Foundry Division and in the forge, heat treat, welding, and snagging departments will be allowed 15 minutes washup time prior to the end of their shifts . . .

Employees were permitted two periods for personal washup, one before lunch and one before quitting time in 54 agreements and at the beginning and end of a shift in 1 additional agreement. Most of these were found in the machinery (except electrical), electrical machinery, and construction industries.

It is recognized that the performance of certain jobs results in the employee being exposed to severe dirt conditions. In these cases, employee will be allowed sufficient time for washing up before lunch time and quitting time.

Five agreements (one in chemicals, two in machinery, one in instruments and related prod-

ucts, and one in construction) provided for washup before lunch only.

In six agreements, the time for washup depended on the job or department; for example:

The employees in the following departments . . . have a 5-minute washup period immediately preceding their lunch periods and a 10-minute washup period immediately preceding the end of their shifts. No other employees have a mid-shift washup period. All other employees in the factory bargaining unit have a 5-minute washup period immediately preceding the end of their shift.

**Paid Cleanup Time.** Paid time for cleaning up the machine or the work place, or returning tools to the tool crib, or other similar duties was provided by 140 agreements; in 60 of these, the provision appeared in combination with washup and/or clothes-change time. In manufacturing industries, this pay practice was most prevalent in petroleum, stone, clay, and glass, food, and transportation equipment. The highest representation among the nonmanufacturing group was in transportation and construction.

Almost half of the 58 contracts which limited pay for cleanup activities to special groups were in meatpacking and transportation, as the following clauses indicate:

Five minutes per day . . . will be paid to employees who use and sharpen one knife daily. Ten minutes per day . . . will be paid to employees who use and sharpen two knives daily . . .

\* \* \*

All operators shall receive 10 minutes preparatory time at the beginning of their runs or trippers and 10 minutes time after car or bus arrives at barn or garage for making out manifests and turning in receipts at the end of the day's work.

Of the 140 agreements with provisions for machine cleanup or similar activities, 101 did not specify an actual time allowance. This omission may be attributed to the fact that variations in the nature of the work in certain plants preclude defining cleanup time in specific time allowances. Of this group, 41 agreements specified only that "reasonable," "sufficient," or the "time necessary" would be allowed. For example:

When an employee is required to return tools or other company equipment at the end of workday he will be allowed a reasonable time therefor before the scheduled end of such workday, taking due account of the distance of his work from the check-in point and the nature of the tools handled.

\* \* \*

TABLE 3. DAILY TIME ALLOWANCE AND TIME ASSIGNMENT FOR WASHUP, CLEANUP, AND CLOTHES CHANGE UNDER MAJOR COLLECTIVE BARGAINING AGREEMENTS, 1959

Daily time allowance and time assignment	Type of provision					
	Washup		Cleanup		Clothes change	
	Agreements	Workers	Agreements	Workers	Agreements	Workers
Total studied.....	1,687	7,477.3	1,687	7,477.3	1,687	7,477.3
Number with provisions....	172	462.6	140	512.4	50	195.3
TIME ALLOWANCE						
Less than 5 minutes.....	2	3.5	2	3.3		
5 minutes.....	28	50.1	15	34.9		
More than 5, less than 10 minutes.....	2	2.4	4	6.9	1	1.2
10 minutes.....	46	130.0	13	31.5	3	7.0
More than 10, less than 15 minutes.....					16	39.5
15 minutes.....	11	30.5	3	15.1		
More than 15 minutes.....	5	9.3	2	4.0	3	12.2
Varies by job, occupation, and/or department.....	25	66.2	16	49.8	5	9.4
To be agreed upon.....			1	2.4	1	8.0
At discretion of employer.....	1	1.6	12	74.3		
"Reasonable," "sufficient," or "time necessary".....	15	29.4	41	140.4	5	7.5
Other.....	18	51.7	16	50.9	18	22.2
No reference.....	19	87.9	15	99.1	8	38.5
TIME ASSIGNMENT						
At end of shift.....	71	179.8	76	246.7	10	35.8
At beginning and end of shift.....	1	1.2	4	11.2	9	59.2
Before lunch.....	5	6.9				
Before lunch and end of shift.....	54	143.1	5	12.9	1	4.7
Varies by job, occupation, and/or department.....	6	16.7	1	1.6	3	3.7
At discretion of supervisor.....			13	80.6	1	2.1
To be agreed upon.....			1	3.0		
Other.....	3	15.0	3	7.9	1	1.2
No reference.....	32	99.9	37	148.6	25	88.7

<sup>1</sup> Includes agreements in which the total daily allowance could be used for washup, cleanup, or clothes change; in a few, the allowance varied by sex.

<sup>2</sup> Includes agreements in which the total daily allowance applied to both cleanup and washup, agreements providing pay in lieu of cleanup time, and those in which the allowance varied with the day of the workweek.

<sup>3</sup> Includes agreements providing pay in lieu of clothes-change time and those in which the allowance covered both clothes change and washup.

<sup>4</sup> Includes agreements in which provisions (1) differed for various groups of employees, (2) provided for local negotiation, and (3) were unclear.

NOTE: Because of rounding, sums of individual items may not equal totals.

Employees engaged in work where tools are taken from department tool rooms shall be allowed sufficient time to return tools or equipment at the end of the shift on company time.

Another 12 agreements, all in the meatpacking industry, made the time allowance discretionary with the employer:

The company shall supply knives, steels, whetstones, and meat hooks prepared for use, at its expense, or permit employees using same to prepare them on company time (as a work assignment determined upon and directed by management), as the company may elect.

Time varied by occupation in 16 agreements, as in the example shown on the following page:

TABLE 4. TOTAL DAILY TIME ALLOWANCE FOR WASHUP, CLEANUP, AND CLOTHES CHANGE UNDER MAJOR COLLECTIVE BARGAINING AGREEMENTS, BY EMPLOYEE COVERAGE, 1959

Total daily time allowance	All agreements		Time allowance provision covering—							
			All employees		Employees in specific groups or occupations only		All employees in some activities and specific groups in other activities		Other <sup>1</sup>	
	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)	Agreements	Workers (thousands)
Total studied.....	1,687	7,477.3	1,687	7,477.3	1,687	7,477.3	1,687	7,477.3	1,687	7,477.3
Number with provisions.....	278	804.8	168	518.9	77	191.6	27	112.4	6	42.0
Time allowance covered all activities:										
Less than 5 minutes.....	3	5.2	2	3.5	1	1.7				
5 minutes.....	40	92.5	31	79.5	9	13.0				
More than 5, less than 10 minutes.....	4	5.8	2	2.4	2	3.4				
10 minutes.....	52	130.9	43	99.9	9	31.0				
More than 10, less than 15 minutes.....	2	5.4	2	5.4						
15 minutes.....	16	45.3	5	20.7	9	20.9	2	3.8		
More than 15, less than 20 minutes.....	2	3.5					2	3.5		
20 minutes.....	6	19.9	1	1.2	3	12.5	2	6.2		
More than 20, less than 30 minutes.....	2	3.3	2	3.3						
30 minutes.....	3	5.6	1	1.5	2	4.1				
Varies by job, occupation, and/or department.....	29	88.5	18	60.0	10	22.3	1	6.2		
To be agreed upon.....	1	2.4			1	2.4				
At discretion of employer.....	3	3.7	2	2.6	1	1.1				
"Reasonable," "sufficient," or "time necessary".....	46	148.9	29	104.0	17	44.9				
Time allowance specified for some activity and for other activities—										
Not indicated.....	4	22.6	3	19.6					1	3.0
Varies by occupation and/or department.....	4	9.8	1	1.6			3	8.2		
Agreed upon.....	1	8.0	1	8.0						
At discretion of employer.....	8	62.0	1	8.0			7	54.0		
"Reasonable," "sufficient," or "time necessary".....	4	7.9	2	2.3			2	5.6		
Other <sup>2</sup> .....	25	67.5	9	25.0	7	14.1	8	25.0	1	3.5
No reference to time allowance.....	23	126.6	13	70.7	6	20.3			4	35.6

<sup>1</sup> Includes agreements providing for the continuation of presently established practices, with no details given.

<sup>2</sup> Includes agreements in which (1) time allowances varied by sex or day of week; (2) provisions applied to all employees but duration was specified for designated groups only; (3) different time allowances were specified for 1 or

more activities and mutual agreement permitted for other activities; and (4) time allowances varied by occupation for some activities and no duration was specified for other activities.

NOTE: Because of rounding, sums of individual items may not equal totals.

Spray painters shall be allowed to leave their jobs 10 minutes before quitting time in order to clean their equipment.

Burners shall be given 2 minutes at lunch time to shut off their gas oxygen and shall be given 5 minutes at quitting time to disconnect and turn in their torches.

Time assigned for cleanup was predominantly at the end of the shift. However, four agreements specified time allowances at the beginning (preparatory time) and end of shift, and five designated time for cleanup before lunch as well as at the end of the shift.

The time allowed for gathering tools and reaching tool shed by quitting time at noon and at 4:30 p.m. is to be agreed upon by the employer and the steward . . .

\* \* \*

Each employee will be allowed personal and area cleanup time before his lunch period and before the end of his work shift . . .

*Paid Clothes-Changing Time.* Paid clothes-changing time, the least prevalent of the three

activities studied, was noted in only 50 agreements. These provisions were concentrated in the food and chemicals industries.

Fewer than half of the 50 contracts providing pay for clothes-change time designated the actual amount of such time. Sixteen agreements allowed 12 minutes; 15 of these were in the meat-packing industry and 1 in ordnance.

Twelve minutes per day will be paid employees for changing clothes, and shall be counted as working time for all purposes.

Employees were authorized to change clothes at the end of the shift in 10 agreements, and in 9, clothes-changing time was at the beginning and end of the shift. Most of these agreements were in the food industry, where employees were required to wear special clothing on the job.

*Total Daily Allowances.* In the 130 agreements with definite time allowances for all of the activities specified in the contract, the combined duration ranged from 3 to 30 minutes per day, with



5 and 10 minutes the most prevalent (table 4).<sup>3</sup> The time allowed exceeded 15 minutes in only 13 agreements. The total time was derived by adding the individual allowances, as in the following examples which provided a total of 30 and 10 minutes per day, respectively:

... The following schedule of allowable time shall be adhered to:

- (1) Five-minute change period at the start of the shift.
- (2) Ten-minute washup period before the eating period.
- (3) Five-minute change period after lunch.
- (4) Ten-minute washup period at the close of the shift.

<sup>3</sup> Applies to agreements which had mentioned 1, 2, or all 3 of the activities studied.

Employees shall be allowed 5-minute washup time at noon and 5 minutes before quitting time to replace tools, clean machines and benches, and wash up . . .

In 148 agreements the total daily allowance could not be ascertained.

In agreements where the provisions applied to special groups of workers only, the total amount of time was more liberal than in situations where they applied to all workers. For example, of the 29 agreements that granted 15 minutes or more, 20 covered special groups or occupations.

—DENA G. WEISS AND THEESSA L. ELLIS  
Division of Wages and Industrial Relations

## Additional Job Protection for Reservists and Guardsmen

THE RECENT AMENDMENT (Public Law 86-632) to the Universal Military Training and Service Act (UMTSA), which goes into effect on September 10, 1960, somewhat modifies and, in certain respects, expands previous statutory provisions for reemployment rights and job-benefit protection of employees called for training duty in the U.S. Armed Forces. Its two major accomplishments are equalization of reemployment rights of reservists and National Guardsmen after training, and creation of additional rights for reservists and National Guardsmen hospitalized incident to or disabled during training.

Prior to this legislation, reemployment rights and job-benefit protection were provided such employees under the Armed Forces Reserve Act of 1952, as amended (section 262(f)), and section 9(g)(3) of the UMTSA. However, under section 262(f), Ready Reservists who performed initial training duty of 3 to 6 months' duration enjoyed greater rights than members of the National Guard called for identical training. The new law re-

moves this inequity by repealing section 262(f) of the Reserve Act and equating National Guardsmen with other Armed Forces reservists in rights based on training—and, incidentally, brings all the legislation on reemployment rights under one statute.

The amendment contains separate provisions for reservists, depending on the type of training program. Section 9(g)(3) of the UMTSA was modified to apply to "any member of a reserve component of the Armed Forces . . . who is ordered to an *initial period of active duty for training* [emphasis added] of not less than 3 consecutive months . . ." A new provision (section 9(g)(4)) covers the reservists in all other training programs—those called for active duty for training (other than the initial training above described) or for inactive duty training. The training programs coming within section 9(g)(4) include weekly and weekend drills which require absence from the employee's normally scheduled work tour; annual training duty, such as summer encampments and cruises; and other types of training, such as attendance at schools and special courses of military instructions whether for less or more than 3 consecutive months. Included in those whose rights are defined by section 9(g)(4)

are persons rejected for military service. Members of the National Guard are included in both sections and hereinafter they will be referred to as reservists.

To have reemployment rights under section 9(g)(3), a reservist called for initial active duty for training must satisfactorily complete his training and must apply for reinstatement to his job within 31 days after his release from duty. Prior to the present amendment, the application period was 60 days. New section 9(g)(3) affords a reservist after initial training an additional protection in case of hospitalization incident to his training duty. His period of application is extended to 31 days after such hospitalization, but not beyond 1 year from his scheduled release from training.

The amendment contains a new provision (section 9(g)(4)) governing reemployment rights and job-benefit protection of reservists after inactive duty training and any active duty for training other than the initial training for at least 3 consecutive months. In this category, the reservist must request a leave of absence from his employer for training duty. (Prior to the amendment, no such request was necessary.) To secure reemployment, he must report for work "at the beginning of his next regularly scheduled working period" following his release from training duty, allowing sufficient time for travel to the place of

his employment. Previously the application period for these reservists was 30 days.

An employee who has requested leave for a physical examination or similar step toward military service and is rejected for service is no longer allowed 30 days for application but must report under the same time limit as the night or weekend trainee.

The application period of a reservist in this group or a rejectee who is hospitalized incident to training or rejection is extended by the duration of hospitalization plus the time necessary for travel to his place of employment, but he must apply not later than 1 year after his rejection or scheduled release from training.

The amendment now gives all trainees who sustain disabilities during training, and as a result are not qualified for their former positions, rights formerly limited to Ready Reservists after their initial 6 months' training. A disabled reservist is now entitled to reemployment in "such other position the duties of which he is qualified to perform as will provide him like seniority, status, and pay or the nearest approximation thereof consistent with the circumstances in his case."

Section 9(g)(4) affords the affected employees protection of seniority standing, pay, status, and vacation that they would have attained had they not been called to training duty.

# Significant Decisions in Labor Cases\*

## Labor Relations

**Strike Benefits.** The U.S. Supreme Court held<sup>1</sup> that a jury's determination that strike benefits in the form of room rent and food vouchers constituted a "gift," which thereby excluded their value from gross income for income tax purposes, was reasonably based on the evidence before it and therefore could not be overthrown.

During 1954, a striker at the Kohler Co. in Wisconsin had received over \$500 in food vouchers and rent from the United Automobile Workers union, but he did not include this amount in his gross income when he computed his income tax for that year. It was union policy to supply assistance on the basis of need to all strikers, regardless of whether they were members of the union, as this striker originally was not. It was also the policy of the union not to supply these needs if State unemployment or local public assistance was readily available, but such was not the case in the Kohler strike area.

A district director of the Internal Revenue Service informed the striker that the aid he had received was considered gross income and therefore he owed an additional \$108 tax. The respondent paid the additional tax but immediately requested a refund on the ground that the assistance was not gross income. When a refund was refused through the regular administrative procedures, the taxpayer brought suit in a Federal district court. At the trial, the jury was instructed to answer one question: Was the assistance a "gift"?<sup>2</sup> The jury decided in the affirmative, but the court, notwithstanding the verdict, entered a judgment in favor of the Government, holding that the assistance did not constitute a gift and therefore did not fall within the exclusion of section 102(a) of the Internal Revenue Code.

In reversing, the court of appeals held that the jury had heard reasonable evidence upon which to base its determination that the assistance constituted a gift and that its reasonable determina-

tion of the facts could not therefore be overturned. In affirming the decision of the court of appeals, the U.S. Supreme Court found that at the trial the Government had raised no objection to the instructions to the jury in regard to excluding the assistance as a gift and that the evidence presented to the jury was adequate to support its finding that the assistance was in fact a gift. The Court concluded, therefore, that the jury was empowered to render the verdict which it did and that its determination of the facts could not be rejected.

Mr. Justice Frankfurter's concurring opinion included a thorough examination of the rulings of the Treasury Department since 1920 on what may be excluded from gross income. He rejected the argument that strike benefits are not "relevantly" different from "subsistence relief" payments, which, the striker asserted, have been excluded from income. According to Justice Frankfurter, not a single exclusion from gross income has been made because the payments were subsistence relief. The grounds for exclusion, in the Justice's view, were either that the payments were gifts or that they were reparations for the loss of some thing or some right, which in itself could never have been regarded as income. As examples of reparations, the Justice cited payments made by an insurance company for the loss of a home by fire. Such payments are not regarded as income because the home itself is not income, and no gain is involved by a nonprofit substitution of money for a home. However, strike benefits are a substitute for wages, which are themselves included in gross income. Therefore, the concurring opinion concluded, the taxpayer's argument that reparations payments should be excluded from gross income also failed.

According to the concurring opinion, the decisive factor was whether the assistance provided was a gift. The opinion conceded that not all strike benefits might be gifts, but it pointed out that according to the district court's instructions

\* Prepared in the U.S. Department of Labor, Office of the Solicitor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law or to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

<sup>1</sup> *United States v. Kaiser* (U.S. Sup. Ct., June 13, 1960).

<sup>2</sup> Section 102(a) of the Internal Revenue Code of 1954 provides: "gross income does not include the value of property acquired by gift. . . ."

under which the jury made its determination, the jury could, with the evidence before it, reasonably hold that the benefits constituted a gift in this case. The concurring opinion stated that it found sufficient evidence in the record to support the theory that the union's assistance was a charitable act and that the strike benefits were therefore a gift.

The dissenting opinion took the position that there was not sufficient evidence to support the jury's conclusion that the strike benefits were a gift within the meaning of section 102(a) of the code. The dissent stated that the intent of the transferor determines whether the object is given as a gift. There was nothing in the record, according to the dissent, to indicate that the union made these payments out of any "detached or disinterested generosity" or "out of affection, respect, admiration, charity, or like impulses." In fact, the dissent pointed out, the union had stated that, to qualify for these benefits, a recipient must be a striker. The dissent asserted that the union's purpose in dispensing these benefits was to support the strike effort and gain an advantage for its members.

The dissent added that the Treasury Department has consistently held over a long period of time that strike benefits are to be included in gross income. In 1957, the Department restated this view and specifically added that such benefits may not be excluded as gifts under section 102(a) of the code.<sup>3</sup>

**Jurisdiction.** The U.S. Supreme Court held<sup>4</sup> that a Federal district court did not encroach upon the jurisdiction of the National Railroad Adjustment Board when it granted an injunction which included conditions designed to preserve the status quo in a case pending before the Board.

When the railroads in this case converted from steam locomotives to diesel engines, they issued general orders eliminating two out of five of their five-man way freight crews and changing the terminals of the remaining crews on a 302-mile branch between Wichita Falls, Tex., and Forgan, Okla. In an effort to preserve these jobs, the employees' unions protested the railroads' action and submitted the matter to the National Mediation Board. After the Mediation Board advised the parties that it did not regard this dispute as one subject to mediation, the unions struck and the

railroads retaliated by obtaining an order in a district court which temporarily restrained the strike. The railroads then submitted the dispute to the National Railroad Adjustment Board, to a national committee and dispute committees established by collective bargaining agreements, and to the National Mediation Board, and amended their complaint in the district court to include these subsequent moves.

The district court granted an injunction, pending the decision by the Adjustment Board, that included certain conditions which gave rise to the controversy before the U.S. Supreme Court. These conditions required the railroads either to restore the situation as it existed before the issuance of their orders eliminating the jobs in question, or to pay the employees affected the wages they would have been entitled to had such orders not been issued. Both parties appealed the action of the district court, the unions from the injunction against the strike and the employers from the conditions preserving the status quo. The court of appeals upheld the strike injunction but denied the district court's power to include the conditions, on the ground that such an inclusion amounted to a consideration of the merits of a "minor dispute," which is within the exclusive jurisdiction of the National Railroad Adjustment Board under the provisions of the Railway Labor Act.

In reversing the decision of the court of appeals vacating the district court's conditions, the U.S. Supreme Court pointed out that the Court had decided in the *Chicago River*<sup>5</sup> case that Federal courts did, generally speaking, have the power to enjoin strikes arising out of minor disputes relating to the construction of a contract when they have been properly submitted to the Adjustment Board and that the prohibitions of the Norris-LaGuardia Act could not be applicable in such cases if the purposes of the Railway Labor Act were to be fulfilled. In the Court's view, the purpose of the Railway Labor Act is to establish the machinery for compulsory arbitration of certain disputes, and unless the Federal courts have the power to enjoin strikes during pendency of such disputes before the Adjustment Board, the purpose of the act is frustrated.

<sup>3</sup> Rev. Rul. 57-1, 1957-1 Cum. Bull. 15, 16-17.

<sup>4</sup> *The Brotherhood of Locomotive Engineers v. Missouri-Kansas-Texas R.R.* (U.S. Sup. Ct., June 20, 1960).

<sup>5</sup> *Brotherhood of Railway Trainmen v. Chicago River and Indiana R.R.* 353 U.S. 30.



The Court found that the relief granted by the district court in this case was in the nature of traditional equitable relief, which was clearly within the court's power unless explicitly or impliedly denied by statute. The Court disagreed with the reasoning of the court of appeals that the Railway Labor Act's grant of exclusive jurisdiction to the Adjustment Board to decide minor disputes acted as a denial of jurisdiction to the district court to add conditions preserving the status quo. The court of appeals had maintained that the conditions imposed by the district court involved a judgment of the merits of the case and therefore usurped the Board's jurisdiction. The Supreme Court, however, reasoned that there was no encroachment on the Board's jurisdiction in this case, because the conditions attached to the injunction were not based on a consideration of the merits of the dispute.<sup>6</sup> While the Court conceded that the district court had to conduct some examination of the nature of the dispute in order to determine the existence of irreparable injury before issuing the injunction, the Court maintained that such an examination was so unlike what the Board would conduct that it could not be said that the Board's jurisdiction was infringed.

Finally, the Court asserted that, far from usurping the jurisdiction of the Adjustment Board, the action of the district court actually preserved the Board's jurisdiction by maintaining the status quo, which prevented the situation from changing to the point where the Board could not restore it later, if it should decide to do so.

*Representation by a Minority Union.* A U.S. court of appeals held<sup>7</sup> that an employer and a union were guilty of unfair labor practices under the Labor Management Relations Act by jointly executing a collective bargaining contract at a time when the union did not represent a majority of the employees in the bargaining unit.

In 1956, the International Ladies' Garment Workers' Union began to organize the employer's plant, and some of the employees signed authoriza-

tion cards designating the union as their bargaining representative. In July 1957, a number of employees struck in protest against a wage reduction, and the union attempted to negotiate the dispute on behalf of some of the strikers. During the negotiations, the parties signed a "memorandum of understanding" containing a statement that the employer recognized the union as the employees' bargaining representative and assurances from the union, based on the number of authorization cards which it held, that it represented a majority of the employees in the bargaining unit. The employer made no investigation of the union's records to determine whether it did in fact possess enough cards to designate itself as the representative of the majority. Several months later, the union and the employer signed a collective bargaining agreement which also contained statements from both sides acknowledging majority union support.

However, the National Labor Relations Board found that on August 30, the date the memorandum of understanding was signed, the union had not been designated, either by a majority vote or by signed cards of a majority of the employees, as the bargaining representative. The Board subsequently issued an order to both union and employer to cease and desist functioning in their present relationship until a Board-conducted election could be held. The union petitioned the court of appeals to review and set aside this order.

Noting that the purpose of section 7 of the LMRA is to guarantee employees freedom to bargain collectively through a representative of their own choice or to refrain from bargaining collectively, the court found that the execution of a contract by the employer and the union, when the union represented only a minority of the employees, denied these rights, at least for the 2-year term of the contract. The court rejected the suggestion that the majority could correct this situation, by presenting a petition for decertification under section 9(c) of the act, by pointing out that the Board had repeatedly held that where a contract bar has been asserted in a decertification proceeding, petitioners are precluded from showing a lack of majority status at the time of the contract's execution.

The court also held that the employer had violated sections 8(a) (1) and (2) by concluding

<sup>6</sup> During the proceedings in the district court, the judge remarked, "Now, let us see where we are. There is a contract. We have not analyzed the contract because it is useless for us to analyze it because regardless of what conclusion we reach about the provisions of that contract we have no right to enforce its provisions or deny its provisions. Those conditions can be determined first only by the Railroad Adjustment Act [sic] . . . . This court is without power to construe that contract, which the defendants claim has been broken by the company." 28 L.W. 4546.

<sup>7</sup> *National Labor Relations Board v. Bernhard-Altmann Texas Corp.* (C.A. D.C., May 19, 1960).

a contract with a union which did not represent a majority of the employees, and the fact that a rival union was not involved made the transgression no less serious. The court indicated that as early as the U.S. Supreme Court's decision in *NLRB v. Jones and Laughlin Steel Corp.*<sup>8</sup> the duty of an employer to recognize the majority's choice of a bargaining representative included the correlative duty to deal with no agent other than that chosen by the majority. The court further declared that the central consideration in this case was not whether the two parties entertained a genuine belief with regard to the majority status but whether they based this belief on an "adequate effort to determine the true facts of the situation." The court stated that the employer and the union each have a clear duty to determine the true nature of the union's claim of majority representation. The court added that if informal methods of investigation fail, the formal method conducted by the Board is available.

The court also analyzed the difference between the instant case and the recent *Curtis* decision of the U.S. Supreme Court.<sup>9</sup> The *Curtis* decision held that peaceful recognition picketing by a union which did not represent a majority of the employees, and which had in fact lost a Board election, did not coerce the employees in violation of their rights under section 7. There as here, the court noted, a union which did not represent a majority of the employees was involved. However, the court distinguished the cases by showing that the *Curtis* case involved a union seeking at some future time to represent employees, whereas the instant case concerned a union which had succeeded in representing employees even beyond the point of signing a collective bargaining agreement with the employer. The court pointed out that the union had already transgressed by executing a contract when it did not represent a majority, whereas in the *Curtis* case the only issue was whether or not the picketing, which was employed in anticipation of representing the employees, was itself a denial of employee rights.

The dissent would have set aside the Board's order on the ground that the union's means to gain recognition were peaceful and that the contract did not contain any unlawful provisions. According to the dissent, the *Curtis* case was applicable here and consequently there would

be no violation of sections 8(b)(1)(A) and 7 of the LMRA. The dissent also stated that there was no violation of sections 8(a)(1) or (2) by the employer because there was no rival union involved nor was there a union-shop provision in the contract. However, the dissent pointed out that it did not intend to imply that the majority of employees could not at any time repudiate the contract. To enable them to do so, the Board, in such circumstances, should not apply its policy of precluding a petitioner in a decertification proceeding from showing that a contract was executed at a time when the union did not represent a majority of the employees.

*Secondary Boycott.* A U.S. district court held<sup>10</sup> that a union did not violate the secondary boycott prohibitions of the LMRA, as amended in 1959, by making nonthreatening pleas to an appropriate representative of a secondary employer reminding him to abide by a valid union contract.

There are two fact situations in this case, one involving the construction site at a tunnel and the other at a garage; both involved attempts on the part of Local 379 of the International Brotherhood of Teamsters to require Consalvo Trucking, Inc., to recognize and bargain with the local.

The Perini Corp., which had the general contract to construct the East Boston Tunnel, held a collective bargaining contract with Local 379 that provided: "If an individual employer shall subcontract work as herein defined, provision shall be made in such subcontract for the observance by said subcontractor of the terms of this agreement." The corporation had contracted with Consalvo Trucking for the use of its trucks and drivers to remove dirt at the tunnel construction site. In an effort to obtain a contract from Consalvo, Mr. Garvey, Local 379's business agent, approached the tunnel's construction superintendent, Mr. Dunne, and in a nonthreatening manner called Mr. Dunne's attention to the fact that Perini was not abiding by its contract with the local since Perini's subcontractor, Consalvo, was not observing union conditions and in addition was employing suspended union members. Mr. Dunne had authority, independent of consultation,

<sup>8</sup> 301 U.S. 1, 44-45.

<sup>9</sup> *NLRB v. Local 639, International Brotherhood of Teamsters*, 362 U.S. 274. See also Monthly Labor Review, May 1960, p. 507.

<sup>10</sup> *Alpert v. Local 379, International Brotherhood of Teamsters* (U.S.D.C. Mass., May 26, 1960).

to hire and fire employees, to hear grievances, and to handle routine problems involving subcontracts. He also had a right to consult the company vice president before acting, which he did in this case, and their meeting resulted in the termination of the contract between Perini and Consalvo.

The general contract for the construction of the Boston Common Garage was held by the Foundation Co. of New York, which had a subcontract with Jeremiah Sullivan Sons, Inc., for the removal of dirt. Sullivan, in turn, had subcontracted for dirt removal with Ox-Bow, Inc., which sold it to Consalvo. Only part of the dirt purchased by Consalvo was removed by Consalvo's trucks and drivers; the remainder was transported by trucks of third persons with whom Ox-Bow had contracts to points designated by Consalvo.

The president of Local 379, Mr. McMorow, advised Edward Ryan, Sullivan's project engineer, and Donald Ryan, Ox-Bow's president, that every truck used on the garage project had to be a union truck or no union driver would work on that project. Later, Mr. Burns, secretary-treasurer of Local 379, asserted in a meeting with Edward Ryan, Mr. Hathaway (described as a "free lance" who gave directions to Ox-Bow's employees), and Mr. Flagg (an Ox-Bow employee who approved the weight of the dirt loads in each truck) that the members of the local would not work for Sullivan, Ox-Bow, or their subcontractors as long as Consalvo used its trucks at the garage site while it had no contract with the local. After this meeting, Flagg refused Consalvo permission to haul dirt from the garage project.

The regional director of the NLRB petitioned a U.S. district court for a temporary injunction to restrain the union's alleged violations of the secondary boycott prohibitions added to the act in 1959 by sections 8(b)(4) (i) and (ii)(B).

The court, however, held that the situation at the garage project was vastly different from the one at the tunnel. The court found that the language of McMorow and Burns was threatening. Both had delivered ultimatums to the representatives of secondary employers and to an employee of another secondary employer stating that if Consalvo trucks continued to operate at the garage site, no union man would work at the project. The court held that this was clearly a violation of section 8(b)(4)(ii)(B) of the act.

As to the first situation involving the East Boston Tunnel, the court held that there was clearly no violation of section 8(b)(4)(ii)(B) because there had been no act by any union officer which could be said "to threaten, coerce, or restrain" with the object of forcing a person to cease using the products of another person. The court stated that Garvey's conduct had merely consisted of pointing out Perini's contract obligations; the court found nothing resembling a threat in his behavior.

The second question was whether Garvey's dealings with Dunne amounted to a violation of section 8(b)(4)(i), which makes it an unfair labor practice for a union "to induce or encourage any individual . . . to engage in . . . a refusal . . . to use . . . or otherwise handle or work on any goods . . . or to perform any services . . . where . . . an object thereof is . . . forcing or requiring any person to cease using . . . the products of any other producer . . . or to cease doing business with any other person . . . ."

The court held there was no violation of this section for two reasons. There was no violation of the letter of the law because Garvey's inducing language did not urge Dunne not to "use, handle, or work on goods or not to perform services." The court pointed out that only in the colloquial sense could it be said that Dunne or Perini was "using" Consalvo's trucks. Moreover, the court noted, "unlike section 8(b)(4)(ii)(B), section 8(b)(4)(i) has not within its scope conduct which has merely the object of persuading another to cease doing business." The court held that section 8(b)(4)(i) is concerned with appeals only to those who perform services manually or clerically, who manually use goods, or who have minor supervisory functions, and does not extend to those who have authority to terminate contracts or otherwise control business relations with the primary employer. The court reasoned that Dunne was a person who held such powers and spoke for his employer and that when Dunne terminated the contract with Consalvo he had full power to do so, notwithstanding his consultation with the Perini vice president. Since Dunne was an appropriate representative of the secondary employer, the court held that Garvey's nonthreatening appeals could not be said to violate section 8(b)(4)(i). To hold otherwise, the court said, would be tantamount to a denial of free speech as protected by the Constitution and specifically safeguarded in section 8(c).



# Chronology of Recent Labor Events

## July 1, 1960

OVERRIDING the President's veto, the Congress enacted a law providing for pay increases to about 1.5 million Federal employees. The measure, effective the first pay period beginning in July, called for increases averaging 7.5 percent for workers in the classified Civil Service and about 8.4 percent for postal workers.

A 2-YEAR AGREEMENT between the Pacific Gas and Electric Co. and the Brotherhood of Electrical Workers, providing for a 4½-percent wage increase for 13,600 employees in northern and central California, went into effect. It contains a clause for wage reopening after 1 year. (See also p. 980 of this issue.)

## July 5

ANNOUNCEMENT was made of an arbitration award, retroactive to June 16, granting a 5-percent increase in basic rates to about 2,000 licensed engineers employed by 19 Atlantic and Gulf Coast passenger and dry cargo ship operators and represented by the Marine Engineers' Beneficial Association. The award, made under a reopening clause of the existing 3-year contract (see Chron. item for June 16, 1958, MLR, Aug. 1958), also included some classification adjustments and 5-percent increases in overtime and penalty rates.

## July 6

IN THE FIRST APPELLATE RULING on section 8(b)(7)(c) of the Landrum-Griffin Act, the United States Court of Appeals in New York City held that picketing was not unlawful merely because, prior to the law's enactment, it had been conducted for recognition purposes. Informational picketing, the court further ruled, may be enjoined only to the extent that, and for the hours when, it has the unlawful effect of cutting off the servicing of the employer by neutral employees. The case, another in a series of suits involving the Stork Club and Local 89, was *McLeod v. Local 89, Hotel & Restaurant Employees Union*.

THE National Agricultural Workers Union (with about 3,000 members), established 26 years ago, announced that its members had voted in a referendum to merge with the Amalgamated Meat Cutters and Butcher Workmen. Delegates to the Meat Cutters' convention, held the first week in July, also approved the merger. (See also p. 981 of this issue.) The Meat Cutters will create a special department for agricultural, processing, and allied workers.

The merger followed by about 1 month the establishment of the Agricultural Workers Organizing Committee by the AFL-CIO (see Chron. item for June 10, 1960, MLR, Aug. 1960).

## July 7

THE U.S. District Court for the District of Columbia held that a finding of the Secretary of Labor under the Immigration and Nationality Act that the admission of Mexicans to work in a struck food processing plant in Texas would adversely affect the wages and working conditions of domestic workers in similar employment meant, contrary to the Immigration and Naturalization Service's application of the finding, that persons who had been commuting across the border were as excludable as any other nonresident alien. The case was *Amalgamated Meat Cutters and Butcher Workmen v. Rogers*.

On July 29, the Secretary denied, in effect, the request of a struck fruit grower in California, DiGiorgio Fruit Corp., for permission to recruit 300 Mexican workers to harvest pears. A substantial number of available domestic workers had refused to accept employment with the company because of the strike. The Secretary pointed out that this situation precluded admission of alien workers under an amendment (P.L. 82-78) to the Agricultural Act of 1949, because, in order to do so, sufficient domestic workers must not be available and the importation of alien workers must not adversely affect the wages and working conditions of workers similarly employed.

## July 9

HAWAIIAN stevedoring firms and the International Longshoremen's and Warehousemen's Union (Ind.) reached agreement on a new contract determining in detail the allocation of a mechanization fund established to ease the impact of automation on the dockworkers. The terms included a guaranteed annual wage of \$4,693 and severance pay for a maximum of 100 longshoremen and clerks who quit the docks voluntarily.

## July 11

THE Radio Corp. of America agreed on a 1-year contract with the Association of Professional Engineering Personnel (Ind.), ending a 6-day strike of 2,400 scientists and engineers at RCA plants in the Philadelphia area. The terms included a 4½-percent pay increase for employees earning from \$6,000 to \$20,000 a year.

## July 12

THE Brotherhood of Railway and Steamship Clerks announced ratification of a contract with Pan American World Airways covering 4,700 clerical workers and freight handlers, including 800 at the Air Force Missile Test Center at Cape Canaveral, Fla. The agreement, to run until December 31, 1962, provided a 38-cent-an-hour package increase. Hourly wages under the new contract range from \$1.92 to \$3.34.



THE President signed an amendment to the Universal Military Training and Service Act, effective September 10, 1960, equalizing reemployment rights of reservists and National Guardsmen and creating additional rights regarding reemployment after hospitalization incident to training or disability during training. (See also p. 969 of this issue.)

### July 13

PROFESSOR HERMAN A. GRAY, of the New York University Law School, who had been serving as the temporary impartial chairman of labor relations in the clothing industry, ordered a manufacturer, Hickory Clothes, Inc., which had moved its factory from New York City to Mississippi in violation of a contract with the Amalgamated Clothing Workers, to "cease and desist" from operating a factory outside New York City, to establish in that city a shop equal in size and productive capacity to the one that had been moved, and to pay the union \$204,681 in lost wages, welfare fund contributions, and vacation payments. The contract prohibited the transfer of operations without the union's consent.

### July 15

MEMBERS of the International Association of Machinists ratified an agreement with the Lockheed Aircraft Co.'s Missile and Space Division covering 10,500 hourly rated workers in California, New Mexico, and Hawaii, including 4,000 (in California installations) who had been on strike since June 15. The terms included wage increases of 4 cents an hour retroactive to June 13 plus 3 cents next year. (See also p. 978 of this issue.)

MARTIN F. O'DONOGHUE submitted his resignation as chairman of the board of Teamsters' monitors, to become effective upon the appointment of his successor.

On July 21, the U.S. Court of Appeals for the District of Columbia ruled that the consent decree establishing monitorship of the Teamsters did not authorize removal of the union's officers, pointing out that the Labor-Management Reporting and Disclosure Act guarantees union members the right to choose their own officers. The issue arose when the Teamsters asked the court to prevent a district court hearing in which the monitor board would attempt to prove that Teamster president Hoffa had misused union funds and should therefore be dismissed.

### July 17

TERMS OF A 74-MONTH CONTRACT for 5,000 workers, negotiated by the New York Paper Cutters and Book-

binders Union with New York City commercial printers, were announced. They included an immediate package increase of \$5.25 a week for journeyman operators and cutters and further increases in future years. The pact also pledged the union to cooperate fully with management in the "utilization of technological improvements." Methods of cooperation were to be worked out by a newly established labor-management committee. (See also p. 979 of this issue.)

### July 21

THE SWITCHMEN'S UNION reached a settlement with 17 western railroads on terms recommended by a Presidential Emergency Board (see Chron. item for May 20, 1960, MLR, July 1960) which were similar to those obtained earlier by the other operating rail unions and included a two-step 4-percent wage increase (see Chron. item for June 3, 1960, MLR, Aug. 1960). The contract is subject to ratification by union members.

### July 28

THE National Labor Relations Board regional office in New York City announced that a representation election among the 1,200 unlicensed seamen of the Esso Standard Oil Co.'s tanker fleet gave victory to the independent Esso Seamen's Association over the Esso Tanker Men's Union, affiliate of the Seafarers' International Union, by a vote of 681 to 384. The two organizations had been contesting the representation for almost a year.

### July 30

NEGOTIATING under a wage reopener, the United Rubber Workers reached agreements with the Firestone Tire and Rubber Co. and the Goodyear Tire and Rubber Co. on a wage increase averaging about 9½ to 10 cents an hour for more than 38,000 workers. Negotiations with the U. S. Rubber Co. and the B. F. Goodrich Co. continued. (See also p. 978 of this issue.)

ANNOUNCEMENT was made of an agreement between the American Federation of State, County and Municipal Employees and the city of Philadelphia providing for a modified union shop for most of the city's 18,000 nonunion employees. The agreement, which is scheduled to take effect with the approval of an ordinance by the city council next month, prohibits about 1,200 employees in high-level supervisory jobs from joining the union. The pact also calls for an annual 15-day period during which members may withdraw from the union.

# Developments in Industrial Relations\*

## Wages and Collective Bargaining

**Rubber.** Near the end of July, the United Rubber Workers and the Big Four rubber companies agreed under wage reopeners of their contracts to wage increases averaging about 9½ to 10 cents an hour for about 75,000 workers. The first agreements, reached on July 30 by Firestone Tire and Rubber Co. and Goodyear Tire and Rubber Co., were followed by settlements with the B. F. Goodrich Co. and, on August 3, with the U.S. Rubber Co. Included in all four settlements were extra increases for many skilled workers. Rubber negotiations in 1959 resulted in pay increases of about 10 cents an hour.<sup>1</sup>

**Shipbuilding.** Ratification of a 3-year contract providing a 28-cent hourly wage package and other benefits for about 11,000 employees of the New York Shipbuilding Corp. of Camden, N.J., was announced June 30 by the Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers and Helpers. The agreement provided for wage increases of 10 cents in each of the first 2 years and 8 cents in the third year, increased insurance benefits, higher pay for work on holidays, and an improved recall provision for laid-off employees with over 10 years' seniority. In addition, the company assumed the cost of an educational program which offers to employees undergraduate and graduate courses at accredited colleges and specialized courses in ordnance, electronics, and Navy fire-control systems.

A 2-year contract between the Electric Boat Division of General Dynamics Corp. at Groton, Conn., and the Metal Trades Council, representing 11 unions, was reached July 6, during a 10-day extension of the agreement that was due to expire June 30. The settlement, effective July 1 and covering 7,200 workers, provided an estimated 19-cent hourly package, including wage increases

of 7 and 8 cents the first and second years, respectively, and improvements in vacations, pensions, and hospitalization and apprentice programs.

**Aircraft.** Contract settlements in the aircraft industry continued to be negotiated during July, in the wake of agreements reached in June with major companies and the United Auto Workers and International Association of Machinists.<sup>2</sup> A 2-year contract between Lockheed Aircraft Co.'s Missile and Space Division and the Machinists was approved by union members on July 15. The agreement, covering about 10,500 workers in California, New Mexico, and Hawaii, ended a strike at the California locations which had begun on June 15. The settlement provided for a 4-cent-an-hour pay raise retroactive to June 13 and an additional 3-cent increase in July 1961. It also incorporated the current 6-cent cost-of-living allowance into base pay and suspended future escalator adjustments until July 1961, with quarterly reviews to be resumed thereafter. Other provisions included extra adjustments for test-base employees and for employees in some classifications as a result of a new job study program, the substitution of an automatic progression schedule for a merit rating plan, and improvements in health and welfare benefits. As in other recent aircraft settlements, a layoff benefit of \$50 for each year of service up to 10 was also provided for those laid off at least 4 weeks.

According to the union, similar wage and layoff benefits were negotiated for 9,000 employees at the company's Marietta, Ga., plant, except that all of the 7-cent pay increase will be deferred until July 1961. This settlement also provided a third week of vacation after 12 years' service and improved life insurance and hospital and surgical benefits.

A 2-year extension of a contract between The Martin Co. and the United Automobile Workers, affecting about 6,000 employees at Middle River (Baltimore), Md., improved fringe benefits in the first year and scheduled a wage increase for 1961. Fringe benefits under the new Martin agreement included an 8th paid "floating holiday," 3 weeks' vacation after 10 instead of 12 years' service,

\*Prepared in the Division of Wages and Industrial Relations, Bureau of Labor Statistics the basis of currently available published material.

<sup>1</sup> See Monthly Labor Review, October 1959, p. 1141.

<sup>2</sup> See Monthly Labor Review, August 1960, p. 860.

revision of the health insurance program, and establishment of a severance pay plan. The latter, financed by employer contributions of \$5.40 a month per employee to a maximum of \$100 per employee, will provide benefits computed at the rate of \$50 for each year of service up to 10 years. Wage increases for 1961 range from 4 to 10 cents an hour (West Coast agreements generally provided for a 7-cent-an-hour raise) and a wage reopener was provided in 1962. Negotiations were originally conducted under a wage reopener clause of a contract scheduled to expire in July 1961.

**Electrical Equipment.** A 6-day strike was ended by a settlement announced July 11 between the Radio Corporation of America and 2,400 employees represented by the Association of Professional Engineering Personnel (Ind.) at Camden, Cherry Hill, Moorestown, and Pennsauken Township, N.J., and Croydon, Pa. The 1-year contract, subject to ratification, provided a 4% percent salary increase. In addition, the union reportedly gained a voice in the company's merit review program.

The Westinghouse Air Brake Co. and the United Electrical, Radio and Machine Workers (Ind.) on July 15 agreed upon a 9-cent-an-hour general wage increase for 4,000 workers. The 1-year contract affected employees at plants in Swissvale and Wilmerding, Pa.

Formal bargaining sessions between the General Electric Co. and the International Union of Electrical Workers, on provisions to replace 5-year contracts expiring this fall, began on July 19, 1960. Preliminary bargaining, which the company had requested be confined to measures to alleviate reductions in employment, centered on differences over the approach to the problem—with the union seeking to discuss the issues on a companywide basis and the company arguing that problems are different at each plant and so must be treated locally.

**Other Manufacturing.** A tentative agreement to end a strike of cannery workers employed by companies affiliated with the California Processors and Growers, Inc., and represented by the Teamsters union, was reached in late June. The settlement, subject to ratification by union members, called for wage increases ranging from

10 to 15 cents an hour retroactive to March 1, 1960, a 9-cent pay increase a year later, and improvements in fringe benefits, including a paid sick-leave plan. The contract covered about 10,000 regular employees and an additional 50,000 seasonal workers.

The Knitted Outerwear Manufacturers Association, Pennsylvania district, and the International Ladies' Garment Workers agreed on a 3-year contract providing for a wage increase of 5 percent to all workers except cutters and knitters, who received a 15-cent hourly increase. The agreement, affecting 8,000 workers, also established a severance pay fund and guaranteed a minimum wage rate 15 cents above the Federal minimum wage, but no less than \$1.225 per hour.

A 74-month contract, the longest ever negotiated in the New York printing industry, was approved by the Printers League Section of the New York Employing Printers Association and the New York Paper Cutters and Bookbinders Union, it was announced on July 17. The agreement, covering 5,000 bindery workers who work on trade pamphlets and for commercial printers in New York, provided weekly increases to journeymen operators and cutters of \$4, effective on July 1 of both 1960 and 1961, \$2 on January 1, 1962, and \$2.50 on January 1 of both 1964 and 1966. In addition, these workers will receive any increases that New York Local 6 of the Typographical Union receives after September 1, 1962. Other workers covered by the contract will receive proportionate increases. Welfare payments will be increased \$1.25 a week in each of the first 2 years, bringing company payments to \$1.06 a man-shift by July 1, 1961. Other benefits were also provided under the new agreement. The contract established a joint committee to work out the means for union cooperation in the utilization of technological improvements.

More than 4,800 employees at the Savannah River plant (Aiken, S.C.) of E. I. du Pont de Nemours & Co., Inc., received increases ranging from 8 to 10 cents for hourly employees and from \$2.50 to \$4 a week for salaried workers. The increases, effective July 4, were announced by the company on July 5.

A 3-year contract, signed in late July between the Kroehler Manufacturing Co. and the Upholsterers' International Union, improved fringe benefits but did not provide an immediate pay

increase. Wage reopeners are scheduled for January of 1961 and 1962. The contract affects about 3,200 employees of the furniture manufacturing concern in New York, North Carolina, Texas, Ohio, Illinois, and California. Fringe benefit improvements included an increased contribution of 1 percent of payroll to the company-financed health and welfare insurance plan.

**Transportation.** Preliminary discussion of work rules between the Nation's railroad carriers and five operating unions halted in early July when the railroads rejected a union proposal that the issue be submitted to a special study commission of labor, management, and public representatives. The carriers turned down the proposal on the grounds that it contained no provision for binding settlement and covered too broad an area. Formal negotiations were to begin on September 7, 1960. The railroads are seeking revisions in six key work rules, including alteration of pay standards to reflect greater train speeds, elimination of rules which ban crews from operating through "crew change" points, establishment of management's right to determine when firemen should be used on diesel and other nonsteam locomotives, and an end to rules requiring standby crews when self-propelled track equipment is used.

Agreement to end the 26-day strike of the Brotherhood of Railroad Trainmen against the Long Island Rail Road was reached on August 3. The union, representing 1,350 workers, had sought a 5-day week with no loss in pay to replace the 6-day week (at 7 days' pay) currently in effect. The company had said it would accept the union's demand if it cooperated in economies to cover the full cost of the change. Settlement terms granted the union the 5-day week. To cover the \$358,000 annual cost of the shorter workweek, the company agreed to assume \$162,000 with the balance to be met by a  $2\frac{1}{2}$ -cent-an-hour reduction in the wage increase received on July 1<sup>3</sup> and revisions of some work rules.

The BRT also agreed to a 3-year moratorium on any other demands. The company said it would go to the New York Public Service Commission for a fare increase to cover its additional costs resulting from the year's negotiations.

The Western Greyhound lines and the Street, Electric Railway and Motor Coach Employees union signed a 2-year contract on July 12 that included a 10-cent-an-hour pay raise, retroactive to March 1, 1960, for 5,200 employees in 11 Western States. An additional 8-cent-an-hour increase is scheduled for March 1, 1961. The agreement also continued the cost-of-living escalator clause and provided improvements in vacations, pensions, and health and welfare contributions.

**Utilities.** On July 15, the Pacific Gas and Electric Co. and the International Brotherhood of Electrical Workers announced ratification of a contract calling for a  $4\frac{1}{2}$ -percent wage increase for 13,600 employees in northern and central California. The 2-year agreement, effective July 1, also provided additional hospital and medical insurance and permitted reopening on wages after 1 year.

The same increase in wages for 7,500 employees of the Niagara Mohawk Power Corp. in upstate New York, also represented by the IBEW, was announced on July 18, 1960. The raise was retroactive to June 1. The 1-year contract also improved disability and medical benefits.

### Union Developments

**Conventions and Mergers.** Merger proposals in the printing and allied trades were the principal item of discussion at the 27th annual convention of the American Newspaper Guild at Chicago in late June. Delegates endorsed a resolution calling for continued talks with other crafts<sup>4</sup> toward "achieving a sound and mutually acceptable basis for unity among the unions in the printing, publishing, and related industries." Pending development of a more specific plan—toward which "every effort" is to be made by the union's next convention in 1961—local unions were urged to participate in newspaper union councils, allied printing trades councils, and city and State central bodies. Both Wilfrid T. Connell and James H. Sampson, presidents of the Photo-Engravers and Stereotypers, respectively,

<sup>3</sup> See Monthly Labor Review, August 1960, p. 860.

<sup>4</sup> See Monthly Labor Review, June 1960, pp. 634-635.



who addressed the convention, endorsed the principle of unity for printing and publishing crafts.

A desire for unity in the printing trades was also expressed at the International Brotherhood of Bookbinders' convention, which called for a single federation of all unions in the industry. Kenneth J. Brown, president of the Amalgamated Lithographers, told the convention that concrete action was necessary to implement statements of policy and suggested that, as a preliminary step, representatives of the two unions meet to form a joint organization plan. In other developments, delegates approved a 15-cent increase in the per capita tax, bringing the range of payments up to \$1 to \$1.75 a month (subject to a referendum vote by the union's 60,000 members); authorized changes in the union's constitution to conform with requirements of the Labor-Management Reporting and Disclosure Act of 1959; and raised the annual salaries of the president, secretary-treasurer, and first vice president to \$17,500, \$17,000, and \$12,500, respectively.

Problems of automation and methods to offset resulting job losses received major attention from delegates to the convention of the Amalgamated Meat Cutters and Butcher Workmen's union. The delegates approved a resolution calling for the entire trade union movement to unite in a campaign for a shorter workweek to offset technological unemployment. Although the union's membership has increased by 50,000 since its 1956 convention, a committee report declared that "less than 160,000 production workers are now required to produce the same amount of red meat which over 190,000 produced in 1956." The report said there has been a 15-percent reduction over a 4-year period in manpower requirements in the canning industry and retail food markets; in the leather industry, technological change plus declining sales has displaced more than 10,000 of the 40,000 production workers employed in 1956. (According to President Thomas J. Lloyd, the union's rise in membership—to a current level of 350,000—was attributable to 146 National Labor Relations Board elections it has won since 1956.)

The Meat Cutters passed a resolution authorizing a merger agreement with the National Agricultural Workers Union, a step already approved by members of the latter union. The merger agreement—pending settlement of final details—calls for a special department for agricultural, processing, and allied workers in the MCBW.

In other actions delegates unanimously re-elected Thomas J. Lloyd as president and Patrick E. Gorman as secretary-treasurer and approved changes in the union constitution.

*Other Union Developments.* Termination of the Teamster monitors board came closer when, on July 21, 1960, the U.S. Court of Appeals for the District of Columbia ruled that the board, established under a consent decree in January 1958,<sup>4</sup> was not authorized to depose union officers. The court ruled in effect that only the union membership, in a regular convention, could oust international officers. Under the consent decree, the board will cease to exist once a new election is held. The issue had been brought before the appellate court by a union plea to prevent a court hearing aimed at President James R. Hoffa's removal on board charges of misuse of union funds. The union's efforts to hold a convention had been opposed chiefly by monitor board chairman Martin F. O'Donoghue, who argued that the only way for the union to be rid of corrupt practices and influences was through Mr. Hoffa's removal. About a week before the appellate court ruling, however, Mr. O'Donoghue had submitted his resignation from the board, to take effect when a successor was sworn in.

The appeals court noted that there had been substantial progress toward settling Teamster-monitors differences over reform procedures, but it rejected a union plea for an immediate convention and election. The court suggested that the parties "consult in an earnest effort to reach an agreed disposition" and indicated that if necessary it might help devise a means "to reach a decision, perhaps with the aid of a master, as to whether the time has come when the . . . membership in the Teamsters are entitled to a convention and election of their officers."

Damage suits totaling \$1 million were filed on July 28 in a Federal district court against Presi-

<sup>4</sup> See Monthly Labor Review, March 1958, p. 300.

dent James G. Cross of the Bakery and Confectionery Workers' International Union (Ind.), the international union, and 13 other union officials. The suits were filed by four leaders of an anti-administration faction who had been dismissed from their union posts earlier in July. Each sought reinstatement, back pay, court and attorney costs, and damages totaling in all \$250,000. Another suit sought financial accounting from Mr. Cross and Secretary-Treasurer Peter H. Olson and an election of officers. Mr. Cross was reportedly willing to retire from his post if he could retain his rights to a pension. The BCW was expelled from the AFL-CIO in December 1957 on the grounds of corrupt leadership.<sup>6</sup>

In the first test of a provision of the Landrum-Griffin Act, Secretary of Labor James P. Mitchell, on July 28, filed suit to nullify an election held by the Independent Petroleum Workers Union, which represents employees of the Esso Standard Oil Co.'s Bayway refinery at Linden, N.J. The action resulted from a complaint filed by John Sullivan, who had been defeated by incumbent President John J. Coppa in an election last February. Mr. Sullivan alleged that too many ballots had been printed; that ballots had been placed in a box "accessible to anyone possessing the combination to the lock . . ."; and that the ballots had been taken from the box "prior to the

agreed time for collection." The union had 20 days to reply.

Late in July, eight labor unions bought a 205-room Miami Beach hotel to be used as a retirement home for their members. According to a spokesman for the group, three or four other area hotels might ultimately be purchased. The participating labor groups were the National Maritime Union, the American Radio Association, the International Brotherhood of Operative Potters, the International Union of Electrical Workers, the International Leather Goods, Plastic and Novelty Workers' Union, the Textile Workers Union of America, the Aluminum Workers International Union, and the Laundry and Dry Cleaning International Union.

In New York City, the Manpower Utilization Council—a newly formed group consisting of 18 business, labor, government, and civic organizations—outlined a program for the economic betterment of low-paid unskilled workers. The council will seek to promote on-the-job training and vocational education to train workers displaced by technological changes, to expand guidance and counseling programs, and to compile an inventory of educational and training resources of the area to avoid duplication and waste.

<sup>6</sup> See Monthly Labor Review, February 1958, pp. 190-191.

# Book Reviews and Notes

EDITOR'S NOTE.—*Listing of a publication in this section is for record and reference only and does not constitute an endorsement of point of view or advocacy of use.*

## Special Reviews

*The New York Hotel Industry: A Labor Relations Study.* By Morris A. Horowitz. Cambridge, Mass., Harvard University Press, 1960. ix, 265 pp. \$6.

This volume is one in a series of Studies in Labor-Management History being published by the Harvard University Press. In many respects it is an ideal contribution to that series. The author deals with multiemployer, multiunion bargaining between 160 hotels in the Hotel Association of New York City and some 32,000 hotel workers in local unions (in 1958) affiliated with their respective internationals but combined for purposes of bargaining into the Hotel Trades Council. The methods of reconciling the interests of so many hotels (of different types and sizes) and the demands of so many different unions in such a way as to maintain stability and peace within the industry constitute the central theme of the book.

Most studies in the development of labor-management relations have tended to be histories of the unions involved, together with a recital of achievements obtained by the workers at each successive negotiating conference. Not only have issues in the administration of labor contracts been sidetracked, but problems of employers as parties to collective agreements have also been sadly neglected. With the exception of a chapter on the Hotel Trades Council—a study of union history not properly oriented to the problems of collective bargaining in the hotel industry—the author has not fallen into these errors. Indeed, he has often given a better insight into the problems of employers than into the problems of unions operating under a collective bargaining system.

Following a background chapter, this history covers a period of 18 years, beginning with the

first collective agreement in 1939. For his research the author was blessed with wholehearted cooperation from both sides. With rare exception his sources are all primary, consisting chiefly of official publications and minutes of meetings of the Hotel Association or of the Hotel Trades Council. He has covered the usual topics of the collective bargaining process: negotiating procedures, wages, strikes, and work and welfare provisions. Throughout he has emphasized the dominant role played by the impartial chairman and by a few other key individuals in the negotiation and administration of contracts. From this study the student of collective bargaining will learn with some astonishment how easily the written word can be adjusted from time to time to meet current issues raised under the constant pressure of preserving peace in a service industry so directly dependent upon the goodwill of the customer.

—JESSE T. CARPENTER

New York State School of Industrial and Labor Relations  
Cornell University

*The Local Union-Management Relationship.* By Milton Derber, W. Ellison Chalmers, Ross Stagner. Urbana, University of Illinois, Institute of Labor and Industrial Relations, 1960. 208 pp., bibliography. \$4.25.

Considering the experience and ability of the three eminent authors, this work is quite disappointing. They have tried to analyze local union-management relationships by "quantitative" measures to show that "systematic" study can lead to useful generalizations about the union-management "accommodation process."

To do this, they conducted standardized questionnaire interviews with two top management and two top union leaders in each of 41 establishments to get information on 12 factors in their relationships: 3 were structural factors (autonomy, use of outsiders, and degree of union influence), 6 involved the "manner" of relations (willingness to make concessions, initiative, legalism, reliance on past practice, use of pressure, speed of settlement), and 3 were psychological (attitude, emotional tone, and understanding of each other).

They then sought through statistical correlation of the ranking on each of these factors to identify major interrelations between the variables and to develop composite profiles of the relationships.

The results are meager. They are confined essentially to confirming broad observations long available from any perceptive nonquantitative analysis. Specifically, the authors conclude that their statistical examination tells policymakers that (1) it is possible to categorize union-management relationships into a number of specific and distinctive types, (2) the type depends on the parties themselves although the "community environment is an important consideration," (3) a harmonious relationship can be achieved only after parties recognize certain differences in their attitudes and "are willing to take them into account," and (4) there is a wide discrepancy between contract provisions and practice on many items, with the amount of divergency varying considerably among establishments. They conclude further that there are many areas for further research. Surely they need not have undertaken a quantitative-measurement project to arrive at conclusions so generalized.

What light does their work cast on the potential usefulness of quantitative research in union-management relationships? Their interviewing experience demonstrates that responses in this field, the descriptions of different aspects of the relationship, are highly impressionistic (the leaders disagreed frequently, often half the time, on answers to the same question). Statistical analysis of their subjective replies can hardly be said to yield objective results.

The authors' approach is also open to question on conceptual and methodological grounds. They freely identify and acknowledge many technical limitations, but that begs the question of whether their approach, however tailored on details, is valuable in this field.

This reader has the strong impression that what the book demonstrates best is: (1) Such quantitative analysis requires very substantial research resources but produces little reliable yield. (2) This approach generates a semantic and technical specialization which inherently complicates and obscures the nature of union-management relationships without adequate redeeming benefits of new insight or clarification. (3) Union-management relationships are not so rational or objective as to lend themselves to useful explanation through a statistical or other mechanical approach.

—SEYMOUR BRANDWEIN  
Department of Research, AFL-CIO

*Manpower Utilization in the Railroad Industry—An Analysis of Working Rules and Practices.* By Morris A. Horowitz. Boston, Northeastern University, Bureau of Business and Economic Research, 1960. 68 pp. \$2.

This illuminating monograph analyzes the impact on manpower utilization of those working rules on U.S. railroads that are most often alleged to be of "make-work" or "featherbedding" character. Professor Horowitz examines the origin and historical development of each such rule, reviews the partisan contentions about it, and offers his own evaluation.

A make-work rule "effects a reduction in effort per man-hour paid for, and thereby leads to a reduction in useful output per man-hour." A featherbedding rule results "in extra compensation for no extra work or for work not performed." The author warns us, however, that a proper appraisal of the social and economic desirability of any work rule requires the application of a "rule of reason" as well as a purely technical analysis.

It is difficult to summarize Horowitz' findings without doing some injustice to his careful (and readable) treatment of inherently complex subject matter. He concludes that there are make-work aspects in the present combination of switching and seniority rules, in the "exceedingly tight and narrow jurisdictional claims over jobs or work," and in State "full-crew" laws; that featherbedding is involved in the monthly guarantees for conductors and brakemen on regularly assigned passenger runs, in the separation of payment for "deadheading" and "held-away-from-home-terminal" time, and in the requirement that firemen be utilized on diesel locomotives in freight and yard service; and that the guarantee of a full day's pay in combination with rules limiting the establishment of interdivisional runs produces a mixture of featherbedding and make-work consequences.

On the other hand, he finds that the often-criticized "dual system" of wage payment is primarily an incentive formula (with advantages for railroad management) designed "to hurry the crew over the run as quickly as possible," and that while its obsolete standards may result in high earnings for many crews, it does not keep unneeded employees in service; that "graduated pay," though perhaps unnecessary, is an objective



criterion related to the handling of larger machines or longer trains; and that there is no significant featherbedding or make-work aspect in deadheading or terminal delay pay, in monthly mileage limitations (a "share-the-work" device), in the job protection provisions for employees displaced by consolidations or abandonments, or in monthly earnings guarantees for employees on work, wreck, or construction trains.

Horowitz emphasizes that since he purposely selected those railroad work rules most frequently criticized, it is not surprising that some were found to have make-work or featherbedding characteristics. There are a host of working rules not covered by this study, however, and he cautions that it would be erroneous to conclude from these findings that the industry is replete with make-work and featherbedding. With one exception, the rules found to contain featherbedding or make-work elements apply only to the 206,000 "operating" (train and engine service) employees, who constitute about one-fourth of total railroad employment (1958 data). Firemen in yard and freight diesel service occupy about 35,000 of these jobs. Horowitz estimates that 15,000 other operating jobs might be eliminated if other rules were amended so as to eradicate make-work and featherbedding elements. (There is no reason to believe that unreasonably restrictive work rules are a substantial cost factor among the 600,000 nonoperating employees.)

Horowitz states that present work rules have undoubtedly retarded the downward employment trend and that fear of unemployment underlies present union and worker resistance to elimination of make-work practices. This is undoubtedly so, but perhaps Horowitz should have broadened his analysis of employment effects to include transportation as a whole. Given the stiff competition among transportation media for many types of traffic, it is a reasonable hypothesis that lower railroad costs if translated into lower railroad prices might, through increased traffic, offset the employment loss brought about by the amendment of present work rules. To the extent that organized railroad labor believes this would occur, its understandable resistance to useful rules changes will be reduced and there will be a more congenial environment for fruitful bargaining.

Horowitz warns against any effort to legislate solutions. While featherbedding and make-work

are "a serious problem" for the railroads, there are no simple answers because of the complex interrelations among the many work rules, the wage structure, and the methods of wage payment. A reasonable solution, he argues, must permit gradual change, severance pay, retraining of displaced employees, and assurance that "every effort will be made to stabilize employment in the industry and maintain a high level of wages." He asserts in a preface that "If solutions are reached, they will be attained through the process of collective bargaining. . . ."

This monograph fills important gaps in the literature on railroad labor and on the evolution of working rules. By its timely appearance, it may also facilitate the current bargaining on work rules by railroad unions and employers. If widely read outside of railroad circles, it will surely raise the level of public understanding about the labor problems in an industry of major public concern.

—MARK L. KAHN

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*Automation and the Worker: A Study of Social Change in Power Plants.* By Floyd C. Mann and L. Richard Hoffman. New York, Henry Holt and Co., 1960. 272 pp. \$4.50.

Two power plants, "Stand" (an old one) and "Advance" (a new one), are the focus of a systematic quantitative study of the impact of automation on the organization of work and the worklife of people.

After carefully pointing out factors independent of automation that could influence satisfaction among employees in Advance, the authors plunge into their main task. Some of the main findings are that automation tends to centralize maintenance and enlarge lower level maintenance jobs so that a given individual is required to become a multiple-skilled employee, which lead to a job with greater variety and challenge, and a reduction of overtime. In terms of organizational structure, automation leads to a reduction of supervisory levels, an increase in the influence of the foremen, and the elimination of many isolated jobs. Shiftwork tends to become more frequent which, in turn, tends to create problems for employees such as instability in their sleeping schedule, inadequate eating arrangements, dis-

turbed familial relationships, and inadequate recreational facilities for nightworkers.

The leadership findings are quite fascinating. For example, after confirming Fleishman's findings (foreman's behavior is affected by that of his immediate superior), they show that the superior, too, operates in a climate which is influenced by someone higher. More interesting is a "hierarchy" of supervisory behavior and attitudes related to the subordinates' satisfaction with the superior. Lowest in respect of his subordinates is the foreman who pulls only for himself. Somewhat higher is the foreman who is wholly identified with the company. Next is the foreman who pulls for the men and the company. This is an interesting "double loyalty" phenomenon among management.

This work represents the most systematic study available on the impact of automation on organization structure, jobs, people, and leadership. I recommend it without hesitation as informative, interesting reading. The only unfulfilled wish I experienced is the need for an overall theoretical framework. But the study is so well carried out and so carefully presented that this omission is not a major problem. However, some day such a theory will be needed. I hope that Mann and Hoffman attempt it. There is little doubt that they would make a significant contribution.

—CHRIS ARGYRIS

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*Employee Discipline.* By Lawrence Stessin. Washington, Bureau of National Affairs, Inc., 1960. 315 pp. \$7.85.

Noting that "fully 30 percent of all grievances that go to arbitration are based on disciplinary decisions of management," Dr. Stessin reviews the hundreds of arbitrators' awards in discipline cases that have been published by the Bureau of National Affairs in its Labor Arbitration Reports. In each case reported on, he digests the facts, extracts the essential points at issue, and summarizes the reasoning which led to the arbitrator's decision. He quotes liberally from the arbitrators' opinions, tying up each case with a running commentary that makes the reading an enjoyable experience.

Happily, Dr. Stessin has avoided any journalistic "sortie" into labor relations. He hasn't taken

sides and has objectively reported conflicting decisions which show that arbitrators differ widely on many of the basic issues in discipline cases.

He has organized the material in a very satisfying sequence, covering the major areas of discipline from insubordination through violation of plant rules and other discipline situations involving union activity, strike actions, and related problems. Through these cases, the author shows how arbitrators interpret the standard "just cause" under the labor contract; how the principle of corrective discipline underlies the vast majority of decisions; and why arbitrators, in reviewing the penalty of discharge, frequently substitute their own judgment of what the appropriate penalty should be, depending on the nature of the offense, the prior conduct record of the employee, and any mitigating or extenuating circumstances that may be offered.

These reported awards support the author's basic points of inquiry, namely, that there is "an emerging pattern of discipline standards in industry" and that arbitrators' decisions reveal a "common law of discipline criteria." Equally important, the study shows that the arbitration of labor disputes no longer is a "haphazard venture" for either the union or management representative when the "tools" of labor arbitration are properly applied, and that the arbitration process and the experienced arbitrators who serve the parties under it provide the essential safeguards necessary in a system for dispensing justice.

Many of those who so glibly criticize arbitration—and arbitrators—without knowing much about the process itself, could learn a great deal from this summary of decisions in disciplinary cases. They would learn that arbitrators generally uphold management's right to establish plant rules unilaterally during the contract term, provided they are reasonable in purpose, do not violate the written contract, and are made known to the union and the employees before they become effective; that the "representative office" of a union shop steward or committeeman does not excuse him from observing plant rules or from complying with his supervisor's orders, and that his leadership position imposes upon him a higher degree of responsibility and accountability than other employees have; and that supervisors must distinguish between the "personal" and "representative" conduct of union representatives and recognize a

shop steward's "privilege"—if not abused—in representing employees under the grievance procedure.

They would also learn that discharge as a disciplinary action does not often constitute the appropriate remedy for cases of chronic absenteeism caused by a physical ailment or for cases of incompetency as distinguished from negligence; that conduct off-the-premises may sometimes subject an employee to disciplinary action; and that corrective discipline—not necessarily the penalty of discharge or demotion or denial of economic benefits—serves not only the employee but also, and far better, the interests of the union and management.

Lawrence Stessin has written an excellent book on arbitrators' decisions in disciplinary cases. His work contributes to a better understanding of the arbitration process in this area of labor relations and deserves to be studied by all levels of management and by union representatives concerned with maintaining and respecting employee discipline in the work unit.

—JULES J. JUSTIN

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## Education and Training

*Careers in: Technical Writing* (Monograph 64, 21 pp.); *The Legal Profession* (Monograph 47, rev. ed., 25 pp.). By Juvenal L. Angel. New York, World Trade Academy Press, Inc., 1960. Bibliographies. \$1.25 each.

*Occupational Abstracts: Fashion Model; Agronomist.* Jaffrey, N. H., Personal Services, Inc., 1960. 6 pp. each. (Nos. 233 and 234.) 50 cents each; 25 cents to students.

*Rehabilitation Services in Canada: Part I, General Review.* Ottawa, Department of National Health and Welfare, Research and Statistics Division, 1960. 235 pp., bibliography. (Health Care Series, Memorandum 8.)

*Training for Skill.* By J. E. Isaac. (In *Personnel Practice Bulletin*, Commonwealth of Australia, Department of Labor and National Service, Melbourne, June 1960, pp. 13-25. 3s. 6d.)

## Employee Benefits

*Pension Planning: A Data Book.* By Elliot Romm. New York, American Management Association, 1960. 79 pp. (Research Study 43.) \$3; \$2 to AMA members.

*The Roles of Benefit Plans in Protection, Compensation, and Cost.* By Robert D. Gray. Pasadena, California Institute of Technology, Industrial Relations Section, 1960. 8 pp. (Circular 24.) Free.

*Maternity Benefit Provisions for Employed Women.* By Sylva S. Beyer. Washington, U.S. Department of Labor, Women's Bureau, 1960. 50 pp. (Bull. 272.) 25 cents, Superintendent of Documents, Washington.

## Health and Safety

*Health Statistics From the U.S. National Health Survey: The Hawaii Health Survey—Description and Selected Results, Oahu, Hawaii, October 1958–September 1959.* Washington, U.S. Department of Health, Education, and Welfare, Public Health Service, 1960. 54 pp. (Publication 584-C3.) 40 cents, Superintendent of Documents, Washington.

*Administration of the Federal Coal-Mine Safety Act, 1952–59.* By James Westfield, H. F. Weaver, C. M. Keenan. Washington, U.S. Department of the Interior, Bureau of Mines, 1960. 70 pp. (Information Circular 7974.) Free.

## Industrial Relations

*An Annotated Bibliography of Industrial Relations and the Small Firm.* By Albert A. Blum. Ithaca, N.Y., Cornell University, New York State School of Industrial and Labor Relations, 1960. 45 pp. (Bibliography Series, 3.) 40 cents; free to New York State residents.

*A Theory of Conflict and Power in Union-Management Relations.* By Robert Dubin. (In *Industrial and Labor Relations Review*, Ithaca, N.Y., July 1960, pp. 501-518. \$1.75.)

*The Arbitration of Two "Management Rights" Issues—Work Assignments and Contracting Out.* Labor-Management Conference held at New York City, February 4, 1960. Ithaca, N.Y., Cornell University, New York State School of Industrial and Labor Relations, 1960. 116 pp.

*How Arbitration Works.* By Frank Elkouri and Edna Asper Elkouri. Washington, Bureau of National Affairs, Inc., 1960. 498 pp. (Rev. ed.) \$9.65.

*Employee Rights and the Employment Relationship.* By Howard M. Vollmer. Berkeley, University of California, Institute of Industrial Relations, 1960. 175 pp. \$3, University of California Press, Berkeley.

*Management and Union Rights in Industrial Establishments.* By Milton Derber. (In *Current Economic Comment*, University of Illinois, Bureau of Economics and Business Research, Champaign, May 1960, pp. 3-11.)



*Bargaining and Group Decision Making: Experiments in Bilateral Monopoly.* By Sidney Siegel and Lawrence E. Fouraker. New York, McGraw-Hill Book Co., Inc., 1960. 132 pp. \$4.90.

*Seniority in Labor Contracts.* By Walter L. Daykin. (In Personnel Administration, Washington, May-June 1960, pp. 36-44. \$1.25.)

*The Labor-Management Reporting and Disclosure Act of 1959—A Symposium.* (In Northwestern University Law Review, Chicago, January-February 1960, pp. 659-824. \$1.50.)

*Some Pitfalls for Employers Under the 1959 Federal Labor Law.* By T. L. Tolan, Jr. (In Labor Law Journal, Chicago, June 1960, pp. 443-452. \$1.)

*Accommodation of the Norris-LaGuardia Act to Other Federal Statutes.* By Ronald M. Loeb. (In Labor Law Journal, Chicago, June 1960, pp. 473-492, 548. \$1.)

*Indiana Labor Relations Law.* By Fred Witney. Bloomington, Indiana University, School of Business, Bureau of Business Research, 1960. 123 pp. (Indiana Business Report 30.)

## Labor Force

*The Changing Woman Worker: A Study of the Female Labor Force in New Jersey and in the Nation From 1940 to 1958.* By Georgina M. Smith. New Brunswick, Rutgers-The State University, Institute of Management and Labor Relations, [1960]. 23 pp. (Bull. 7.)

*Employment and Conditions of Work of Nurses.* Geneva, International Labor Office, 1960. 176 pp. (Studies and Reports, New Series, 55.) \$2. Distributed in United States by Washington Branch of ILO.

*Migratory Labor in Wisconsin Agriculture, 1959.* Madison, Industrial Commission of Wisconsin, State Employment service, [1960]. 15 pp. Free.

*High-Level Manpower in Overseas Subsidiaries: Experience in Brazil and Mexico.* By John C. Shearer. Princeton, N.J., Princeton University, Industrial Relations Section, 1960. 161 pp., bibliography. \$3.

*Science and Engineering in American Industry—Report on a 1956 Survey.* Prepared by Bureau of Labor Statistics. Washington, National Science Foundation, 1960. 117 pp. (NSF 59-50.) 70 cents, Superintendent of Documents, Washington.

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# Current Labor Statistics

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<sup>1</sup> This table is included in the January, April, July, and October issues of the Review.

NOTE: The following applies, with a few exceptions, to the statistical series published in the Current Labor Statistics section: (1) The source is the U.S. Department of Labor, Bureau of Labor Statistics; (2) a description of each series may be found in Techniques of Preparing Major BLS Statistical Series, BLS Bull. 1168 (1964); and (3) the scope of coverage is the United States without Alaska and Hawaii. Exceptions are noted on the tables.

## A.—Employment

TABLE A-1. Estimated total labor force classified by employment status, hours worked, and sex  
(In thousands)

Employment status	Estimated number of persons 14 years of age and over <sup>1</sup>															
	1960												1959		Annual average	
	July	June	May	Apr.	Mar.	Feb.	Jan. <sup>2</sup>	Dec.	Nov.	Oct.	Sept.	Aug.	July	1958	1957 <sup>3</sup>	
Total, both sexes																
Total labor force.....	75,215	75,499	73,171	72,331	70,993	70,970	70,889	71,808	71,839	72,629	72,109	73,204	73,875	71,284	70,746	
Civilian labor force.....	72,706	73,002	70,667	69,819	68,473	68,449	68,168	69,276	69,310	70,103	69,577	70,667	71,228	68,647	67,946	
Unemployment.....	4,017	4,423	3,459	3,000	4,206	3,931	4,149	3,577	3,670	3,272	3,230	3,426	3,744	4,081	2,936	
Unemployment rate, seasonally adjusted <sup>4</sup> .....	5.4	5.5	4.9	5.0	5.4	4.8	5.2	5.2	5.6	5.0	5.6	5.5	5.1	6.8	4.3	
Unemployed 4 weeks or less.....	1,571	2,654	1,638	1,680	1,816	1,476	1,909	1,683	1,846	1,607	1,539	1,567	1,773	1,833	1,485	
Unemployed 5-10 weeks.....	1,033	695	644	567	855	1,098	930	833	764	651	662	786	922	959	630	
Unemployed 11-14 weeks.....	278	259	250	309	619	306	400	250	276	288	293	290	251	438	240	
Unemployed 15-26 weeks.....	418	420	509	705	715	533	441	381	356	333	340	290	303	785	321	
Unemployed over 26 weeks.....	416	306	411	499	502	431	460	430	428	393	396	493	515	667	239	
Employment.....	68,689	68,579	67,208	66,159	64,267	64,520	64,020	65,699	65,640	66,831	66,347	67,241	67,594	63,966	66,011	
Nonagricultural.....	61,805	61,722	61,371	60,765	59,702	59,901	59,409	60,888	60,040	60,707	60,105	60,884	60,759	58,122	58,789	
Worked 35 hours or more.....	45,380	47,879	48,694	44,829	46,181	45,357	47,115	48,455	43,877	45,800	41,869	45,797	44,963	44,873	46,238	
Worked 16-34 hours.....	6,586	7,281	7,203	10,455	7,585	8,605	6,807	7,227	10,991	9,049	21,859	6,066	6,333	7,324	6,933	
With a job but not at work <sup>5</sup> .....	2,702	2,921	3,578	5,945	3,575	3,533	3,854	3,496	3,284	5,809	2,929	2,469	2,483	3,047	2,777	
Agricultural.....	7,136	3,691	1,967	2,185	2,396	2,386	2,070	1,707	1,920	2,490	3,450	6,960	6,900	2,876	2,527	
Worked 35 hours or more.....	6,585	6,856	5,537	5,393	4,555	4,619	4,611	4,811	5,601	6,124	6,242	6,357	6,825	5,444	6,222	
Worked 16-34 hours.....	4,957	4,874	4,129	3,788	2,465	2,597	2,622	2,978	3,774	3,972	4,282	4,540	4,730	3,827	4,197	
Worked 1-14 hours.....	1,371	1,492	1,254	1,189	1,117	1,121	1,175	1,175	1,307	1,531	1,393	1,230	1,471	1,361	1,413	
With a job but not at work <sup>5</sup> .....	403	408	366	312	586	557	536	474	373	468	441	387	428	457	416	
155	82	89	105	400	344	273	186	144	154	125	202	195	199	190	196	
Males																
Total labor force.....	50,998	50,949	49,337	49,060	48,445	48,487	48,412	48,778	48,729	49,045	49,110	50,220	50,684	48,802	48,649	
Civilian labor force.....	48,821	48,484	46,865	46,580	45,958	45,999	45,923	46,278	46,232	46,551	46,610	47,725	48,179	46,197	45,882	
Unemployment.....	2,504	2,696	2,154	2,431	2,910	2,672	2,821	2,405	2,370	2,097	2,022	2,138	2,315	3,155	1,968	
Employment.....	46,017	45,788	44,713	44,149	43,048	43,326	43,103	43,873	43,863	44,454	44,588	45,587	45,863	43,042	43,919	
Nonagricultural.....	40,617	40,462	39,932	39,574	39,038	39,319	39,108	39,744	39,337	39,762	39,764	40,537	40,493	38,240	38,982	
Worked 35 hours or more.....	32,201	33,718	33,808	31,761	32,273	31,851	32,973	33,645	30,730	31,987	32,179	32,653	31,966	31,390	32,546	
Worked 16-34 hours.....	3,300	3,551	3,284	5,170	3,554	4,361	3,341	3,446	5,954	4,594	13,046	2,933	3,221	3,736	3,461	
Worked 1-14 hours.....	1,091	1,193	1,502	1,433	1,559	1,547	1,440	1,468	1,363	1,437	1,244	1,043	1,236	1,829	1,197	
With a job but not at work <sup>5</sup> .....	4,026	1,999	1,237	1,210	1,653	1,557	1,354	1,180	1,291	1,743	2,296	3,005	4,071	1,784	1,748	
Agricultural.....	5,399	5,325	4,749	4,575	4,010	4,009	3,995	4,128	4,526	4,782	4,824	5,050	5,369	4,902	5,037	
Worked 35 hours or more.....	4,247	4,232	3,705	3,503	2,257	2,307	2,409	2,729	3,306	3,481	3,952	4,063	4,963	3,413	3,716	
Worked 16-34 hours.....	745	724	695	749	859	815	870	945	800	961	780	647	792	857	842	
Worked 1-14 hours.....	278	296	273	228	514	482	462	380	281	298	281	291	312	353	309	
With a job but not at work <sup>5</sup> .....	129	73	75	95	380	315	253	177	137	142	111	182	174	179	171	
Females																
Total labor force.....	24,217	24,550	23,835	23,271	22,548	22,482	22,277	23,030	23,110	23,584	22,999	22,974	23,191	22,482	22,097	
Civilian labor force.....	24,185	24,518	23,903	23,239	22,516	22,450	22,245	22,998	23,078	23,552	22,967	22,942	23,159	22,481	22,064	
Unemployment.....	1,513	1,727	1,276	1,229	1,296	1,258	1,328	1,172	1,301	1,265	1,209	1,288	1,429	1,826	1,043	
Employment.....	22,672	22,791	22,627	22,010	21,219	21,192	20,917	21,826	21,777	22,287	21,759	21,654	21,731	20,654	21,021	
Nonagricultural.....	21,187	21,260	21,439	21,191	20,664	20,682	20,301	21,144	20,703	20,945	20,341	20,347	20,276	19,882	19,837	
Worked 35 hours or more.....	13,178	14,180	14,786	13,066	13,878	13,905	14,144	14,809	13,145	13,810	13,689	13,148	12,997	13,483	13,062	
Worked 16-34 hours.....	3,287	3,680	3,819	5,285	4,032	4,244	3,825	3,781	5,038	4,454	8,812	3,133	3,114	3,589	3,491	
Worked 1-14 hours.....	1,611	1,728	2,075	1,912	2,016	2,008	1,916	2,028	1,891	1,933	1,684	1,365	1,447	1,718	1,580	
With a job but not at work <sup>5</sup> .....	3,110	1,691	759	928	738	829	716	527	628	747	1,154	2,704	2,819	1,068	1,073	
Agricultural.....	1,485	1,531	1,088	819	555	610	615	683	1,074	1,343	1,418	1,307	1,485	1,042	1,184	
Worked 35 hours or more.....	707	643	424	283	209	198	213	249	467	491	600	608	640	414	482	
Worked 16-34 hours.....	825	768	558	439	257	305	308	330	507	670	641	581	680	304	871	
Worked 1-14 hours.....	125	112	93	84	71	75	74	94	92	170	161	95	116	104	107	
With a job but not at work <sup>5</sup> .....	26	9	14	11	20	26	20	9	8	11	14	21	21	20	26	

<sup>1</sup> Estimates are based on information obtained from a sample of households and are subject to sampling variability. Data relate to the calendar week ending nearest the 15th day of the month. The employed total includes all wage and salary workers, self-employed persons, and unpaid workers in family-operated enterprises. Persons in institutions are not included.

<sup>2</sup> Because of rounding, sums of individual items do not necessarily equal totals.

<sup>3</sup> Data for 1960 include Alaska and Hawaii and are therefore not directly comparable with earlier data. The levels of the civilian labor force, the employed, and nonagricultural employment were each increased by more than 200,000. The estimates for agricultural employment and unemployment were affected so slightly that these series can be regarded as entirely comparable with pre-1960 data.

<sup>4</sup> Beginning with January 1957, 2 groups numbering between 200,000 and 300,000 which were formerly classified as employed (under "with a job but not at work") were assigned to different classifications, mostly to the unem-

ployed. For a full explanation, see Monthly Report on the Labor Force, February 1957 (Current Population Reports, Labor Force, Series P-67, No. 178).

<sup>5</sup> Unemployment as a percent of labor force.

<sup>6</sup> Includes persons who had a job or business but who did not work during the survey week because of illness, bad weather, vacation, or labor dispute. Prior to January 1957, also included were persons on layoff with definite instructions to return to work within 30 days of layoff and persons who had new jobs to which they were scheduled to report within 30 days. Most of the persons in these groups have, since that time, been classified as unemployed.

NOTE: For a description of these series, see Explanatory Notes (in Employment and Earnings, U.S. Department of Labor, Bureau of Labor Statistics, current issues).



TABLE A-2. Employees in nonagricultural establishments, by industry<sup>1</sup>

Industry	1960												1969					Annual average	
	July <sup>1</sup>	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958				
	52,910	53,284	52,957	52,844	52,172	52,060	52,078	53,756	52,795	52,569	52,648	52,066	52,343	51,975	50,548				
Total employees.....	556	679	677	677	666	669	655	668	660	621	620	639	710	676	721				
Mining.....	95.1	95.5	96.1	95.1	93.2	88.6	72.7	69.5	67.2	46.5	46.7	62.0	97.4	80.1	93.1				
Metal.....	33.5	33.5	34.2	33.4	32.9	32.6	32.3	30.0	9.7	9.7	10.6	35.2	27.2	27.2	28.6				
Iron.....	32.0	31.3	31.3	30.2	26.4	11.1	8.1	8.0	8.7	8.9	20.1	31.0	22.3	22.3	23.6				
Lead and zinc.....	11.7	11.9	12.3	12.3	12.3	12.3	12.2	12.1	12.0	11.4	11.6	12.9	12.7	12.3	13.9				
Anthracite.....	11.7	12.2	12.2	14.1	13.5	15.5	15.7	15.9	15.9	16.0	15.6	15.4	17.1	16.3	20.3				
Bituminous coal.....	145.8	164.0	167.2	168.7	171.5	173.2	173.2	173.7	164.3	165.4	130.3	135.8	171.3	168.1	195.2				
Crude-petroleum and natural-gas production.....	291.4	286.2	287.3	284.6	287.7	291.4	297.0	297.0	297.0	296.6	306.0	309.7	310.7	300.8	302.6				
Petroleum and natural-gas production (except contract services).....	176.9	174.2	174.8	174.3	175.9	177.7	177.7	177.9	177.7	178.4	181.8	183.7	184.0	180.6	188.0				
Nonmetallic mining and quarrying.....	116.1	116.6	115.7	112.6	102.9	104.1	105.1	111.6	114.2	114.2	115.2	115.7	113.8	110.7	109.3				
Contract construction.....	3,102	2,983	2,830	2,590	2,312	2,359	2,453	2,699	2,856	2,961	3,043	3,197	3,035	2,767	2,648				
Nonbuilding construction.....	648	594	502	416	429	437	518	587	634	690	688	687	584	559					
Highway and street construction.....	316.1	284.2	222.0	161.5	167.5	170.0	220.5	270.8	309.5	329.5	347.2	343.0	271.2	250.0					
Other nonbuilding construction.....	331.8	310.1	279.7	254.5	261.4	267.3	297.0	316.6	324.0	330.8	340.4	344.1	312.7	313.2					
Building construction.....	2,335	2,236	2,088	1,896	1,960	2,016	2,181	2,299	2,327	2,262	2,419	2,348	2,183	2,079					
General contractors.....	815.0	774.2	705.4	609.8	638.7	660.5	725.5	764.8	801.6	827.7	849.5	836.7	757.9	750.6					
Special-trade contractors.....	1,519.5	1,461.9	1,382.7	1,286.6	1,321.7	1,355.1	1,455.2	1,534.2	1,525.4	1,434.5	1,568.8	1,511.3	1,434.7	1,328.6					
Plumbing and heating.....	310.5	304.2	292.1	287.5	296.6	308.6	314.6	322.6	329.1	330.8	323.5	310.8	303.6						
Painting and decorating.....	237.1	222.0	196.3	179.9	173.2	183.5	204.9	222.0	228.4	239.9	246.9	239.9	201.4	169.6					
Electrical work.....	186.3	176.5	170.0	165.3	169.3	171.0	176.3	180.1	181.1	185.1	184.2	179.1	174.2	173.2					
Other special-trade contractors.....	785.6	759.2	724.3	660.2	686.7	704.0	765.4	788.0	792.8	801.1	807.9	793.8	738.6	682.2					
Manufacturing.....	16,249	16,414	16,348	16,380	16,478	16,530	16,470	16,484	16,280	16,197	16,267	16,169	16,410	16,168	15,460				
Durable goods.....	9,332	9,500	9,516	9,548	9,630	9,680	9,640	9,577	9,313	9,168	9,225	9,088	9,523	9,290	8,743				
Nondurable goods.....	6,917	6,914	6,832	6,832	6,848	6,850	6,830	6,907	6,967	7,029	7,142	7,111	6,887	6,878	6,725				
Durable goods.....	134.4	149.5	149.4	150.0	150.7	150.0	149.4	149.5	147.0	145.3	145.2	142.3	142.4	141.7	126.7				
Lumber and wood products (except furniture).....	677.8	680.1	660.7	636.0	624.2	628.1	629.4	651.6	667.2	670.9	687.9	696.0	694.4	658.0	621.7				
Logging camps and contractors.....	127.6	108.5	92.9	90.3	91.9	63.2	102.2	106.1	107.7	108.4	114.6	115.3	98.7	86.3					
Sawmills and planing mills.....	326.3	318.1	310.7	304.8	305.9	306.3	316.8	323.6	329.0	332.9	333.2	330.4	316.9	311.0					
Millwork, plywood, and prefabricated structural wood products.....	133.6	132.7	132.0	130.2	131.6	131.5	134.9	138.4	142.6	145.5	147.4	147.0	139.1	127.1					
Wooden containers.....	44.8	44.8	43.6	42.2	42.2	42.3	43.0	42.5	43.5	43.7	43.2	44.8	44.0	44.7					
Miscellaneous wood products.....	56.8	56.6	57.4	56.7	56.5	56.1	56.0	56.6	57.1	57.4	57.0	56.9	56.3	52.7					
Furniture and fixtures.....	385.6	390.7	388.3	361.3	360.8	360.8	361.1	361.2	360.6	361.9	362.0	366.3	382.2	384.0	357.8				
Household furniture.....	279.6	279.5	282.3	282.2	282.9	283.4	285.1	285.3	285.9	286.6	280.1	276.6	279.3	257.1					
Office, public-building and professional furniture.....	49.6	48.3	48.5	48.1	47.4	47.1	46.9	47.0	47.7	48.1	48.0	45.8	46.1	43.8					
Partitions, shelving, lockers, and fixtures.....	37.0	35.7	35.9	35.5	35.7	36.1	35.8	35.6	33.7	33.8	33.4	35.5	34.4	34.8					
Screens, blinds, and miscellaneous furniture and fixtures.....	24.5	24.8	24.6	25.0	24.8	24.5	23.4	22.7	24.6	25.5	24.8	24.3	24.2	22.5					
Stone, clay, and glass products.....	562.5	561.4	558.1	554.1	547.8	551.0	548.0	557.3	561.6	561.6	572.8	571.5	565.7	550.4	514.5				
Flat glass.....	28.7	30.8	31.7	34.4	36.3	36.5	36.4	36.3	36.7	34.7	34.1	32.7	32.7	27.3					
Glass and glassware, pressed or blown.....	109.4	106.9	105.5	104.0	104.0	101.1	102.1	103.8	99.2	101.5	102.9	100.9	100.2	96.5					
Glass products made of purchased glass.....	16.5	16.8	16.8	17.2	17.6	17.5	17.8	18.4	18.6	18.6	18.1	17.9	18.0	16.3					
Cement, hydraulic.....	42.9	42.1	41.2	39.0	38.4	39.8	41.4	41.8	41.1	42.2	42.6	43.5	41.7	42.0					
Structural clay products.....	75.7	76.0	74.5	72.3	72.7	73.3	76.0	77.4	77.6	77.6	78.7	78.4	75.5	73.1					
Pottery and related products.....	48.8	48.5	49.2	49.5	49.4	48.9	48.8	49.8	49.8	50.1	49.7	49.4	48.1	43.9					
Concrete, gypsum, and plaster products.....	120.8	118.5	118.4	111.8	112.8	112.6	116.6	118.3	121.8	126.4	126.2	123.5	117.8	108.8					
Cut-stone and stone products.....	18.4	18.1	18.0	17.5	17.5	17.3	17.7	18.0	18.2	18.4	18.6	18.4	18.1	18.3					
Miscellaneous nonmetallic mineral products.....	99.5	100.1	100.8	101.4	102.3	101.0	100.5	98.1	96.3	100.2	99.7	101.0	96.3	80.3					
Primary metal industries.....	1,159.3	1,301.9	1,224.9	1,260.5	1,273.3	1,280.7	1,275.1	1,264.2	1,196.2	823.9	834.1	856.2	1,266.1	1,137.7	1,104.4				
Blast furnaces, steel works, and rolling mills.....	582.4	606.5	626.5	635.9	640.1	638.8	634.1	697.3	722.8	729.0	742.2	630.8	822.0	836.7					
Iron and steel foundries.....	223.2	222.5	227.5	228.4	232.2	230.3	230.3	215.8	226.9	228.3	226.7	230.1	223.9	197.4					
Primary smelting and refining of nonferrous metals.....	59.4	58.6	59.4	57.8	54.7	53.2	49.7	44.3	44.9	45.2	53.7	56.9	52.2	58.2					
Secondary smelting and refining of nonferrous metals.....	11.9	12.1	12.4	12.6	12.6	12.7	12.4	12.0	11.9	12.0	12.8	12.5	12.2	11.5					
Rolling, drawing, and alloying of nonferrous metals.....	113.7	112.2	113.6	115.3	115.4	116.0	116.6	116.2	117.0	117.6	117.1	119.4	115.8	106.5					
Nonferrous foundries.....	61.7	61.1	62.8	65.4	67.0	67.3	67.0	66.1	67.6	66.1	64.6	64.1	64.8	57.7					
Miscellaneous primary metal industries.....	149.6	151.9	154.3	157.9	158.7	156.8	154.1	144.8	132.8	135.9	137.1	132.3	140.8	139.4					

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry<sup>1</sup>—Continued

Industry	[In thousands]												Annual average		
	1960												1959		
	July <sup>1</sup>	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Manufacturing—Continued															
Durable goods—Continued															
Fabricated metal products (except ordnance, machinery, and transportation equipment).....	1,065.9	1,087.1	1,080.8	1,079.8	1,097.3	1,106.2	1,099.2	1,082.0	1,042.1	1,051.6	1,082.6	1,055.9	1,064.1	1,069.0	1,029.0
Tin cans and other tinware.....	63.9	62.2	59.7	59.1	58.2	58.5	58.5	56.8	55.9	56.4	60.4	64.7	62.8	59.6	58.2
Cutlery, handtools, and hardware.....	132.2	133.0	134.0	137.5	139.7	139.8	138.1	123.7	130.1	138.5	134.7	132.4	134.2	128.3	
Heating apparatus (except electric) and plumbers' supplies.....	115.8	116.0	116.1	116.4	117.4	116.9	114.2	116.5	120.6	121.7	120.6	116.6	116.6	109.3	
Fabricated structural metal products.....	293.4	287.7	282.0	282.5	282.3	281.8	282.1	275.5	263.2	273.7	278.8	303.1	288.3	303.0	
Metal stamping, coating, and engraving.....	236.1	236.5	237.2	246.0	251.2	246.1	239.3	223.3	237.2	239.2	219.8	228.0	230.1	210.7	
Lighting fixtures.....	49.4	48.1	49.8	50.9	51.1	50.8	49.9	49.8	51.4	51.3	47.6	47.6	49.2	44.7	
Fabricated wire products.....	56.7	57.4	58.1	59.6	60.5	60.0	59.2	57.2	54.4	54.5	52.8	56.0	56.5	52.4	
Miscellaneous fabricated metal products.....	139.6	139.9	143.1	145.3	145.8	145.3	142.4	140.2	138.0	138.0	135.4	137.6	137.5	123.3	
Machinery (except electrical).....	1,636.2	1,657.4	1,660.9	1,677.8	1,687.7	1,691.1	1,675.0	1,660.3	1,625.5	1,636.5	1,658.3	1,624.6	1,633.9	1,611.7	1,801.2
Engines and turbines.....	101.6	103.2	104.3	107.1	107.1	107.4	108.5	107.3	104.6	105.7	106.4	103.6	104.1	103.1	
Agricultural machinery and tractors.....	149.6	149.3	153.4	159.1	160.5	157.8	154.1	141.0	151.4	157.5	158.9	171.5	157.9	138.9	
Construction and mining machinery.....	127.4	130.3	132.5	133.0	132.6	131.2	129.2	125.2	126.3	132.6	132.1	135.5	129.9	122.0	
Metalworking machinery.....	265.1	263.5	264.7	263.1	259.9	257.3	255.4	251.6	247.9	246.5	239.9	239.3	238.7	223.7	
Special industry machinery (except metalworking machinery).....	177.5	176.5	176.1	175.4	174.6	173.3	172.3	171.8	169.8	170.3	166.8	165.9	165.5	159.6	
General industrial machinery.....	230.9	230.1	231.0	232.7	233.0	229.4	229.3	228.9	229.5	229.4	230.3	226.2	223.5	220.1	
Office and store machines and devices.....	140.4	138.9	139.0	138.3	137.6	137.6	138.1	136.9	136.0	134.5	132.4	129.8	132.7	124.9	
Service industry and household machines.....	192.4	196.5	197.7	195.3	198.5	194.4	189.6	184.4	186.3	185.7	185.7	186.3	184.9	168.9	
Miscellaneous machinery parts.....	272.5	272.6	279.1	283.7	287.0	285.5	285.0	281.4	283.6	282.4	274.9	275.3	275.5	252.0	
Electrical machinery.....	1,286.8	1,295.7	1,289.6	1,293.7	1,310.0	1,318.4	1,318.6	1,317.0	1,301.5	1,311.2	1,301.8	1,290.6	1,241.6	1,241.6	1,118.8
Electrical generating, transmission, distribution, and industrial apparatus.....	413.7	414.8	417.9	421.4	422.5	420.5	419.5	407.4	413.1	416.9	411.4	407.0	402.1	373.5	
Electrical appliances.....	39.1	38.9	39.3	40.3	40.0	39.6	39.5	39.5	40.3	39.7	37.9	36.9	37.7	34.6	
Insulated wire and cable.....	28.6	28.6	28.3	28.9	29.1	29.5	29.3	28.8	28.7	28.0	27.7	26.9	28.1	25.4	
Electrical equipment for vehicles.....	71.3	70.9	72.6	75.4	77.0	76.4	74.4	70.7	73.5	72.5	61.3	68.6	69.8	61.8	
Electric lamps.....	29.1	29.5	29.8	29.7	29.8	29.6	29.5	29.5	29.5	28.6	27.7	27.5	27.6	26.4	
Communication equipment.....	664.5	658.0	657.5	666.1	671.3	674.2	674.7	674.9	675.3	664.4	645.3	625.8	627.2	651.4	
Miscellaneous electrical products.....	49.4	48.9	48.3	48.2	48.7	48.8	50.1	50.7	51.1	51.7	49.3	48.9	49.1	45.7	
Transportation equipment.....	1,579.6	1,606.4	1,632.8	1,668.1	1,700.9	1,721.4	1,722.3	1,655.9	1,511.1	1,622.4	1,585.4	1,619.8	1,692.8	1,670.8	1,502.8
Motor vehicles and equipment.....	784.1	785.0	790.8	819.0	837.7	822.6	785.9	692.2	784.2	758.7	679.2	744.3	731.6	630.8	
Aircraft and parts.....	616.7	658.3	668.7	680.3	687.0	693.7	700.9	709.7	717.4	730.5	732.4	735.6	734.9	757.6	
Aircraft.....	371.2	381.4	387.0	393.0	397.2	400.6	404.2	412.3	418.4	429.2	433.4	433.4	435.0	457.2	
Aircraft engines and parts.....	113.4	138.7	139.8	140.7	140.6	142.0	144.2	144.9	145.2	145.8	144.0	146.8	146.3	192.6	
Aircraft propellers and parts.....	8.3	14.1	13.9	14.0	13.8	13.8	13.6	13.6	13.6	14.1	14.0	14.3	14.4	18.3	
Other aircraft parts and equipment.....	123.8	124.1	128.0	132.6	135.4	137.3	138.9	138.9	139.9	141.4	141.4	141.1	139.2	129.5	
Ship and boat building and repairing.....	134.7	137.4	135.6	132.4	131.0	145.6	140.7	141.9	131.1	131.3	140.7	144.6	142.8	144.5	
Shipbuilding and repairing.....	111.4	112.3	110.1	107.4	106.4	121.7	117.5	119.5	109.7	111.1	121.2	123.3	120.9	131.3	
Boatbuilding and repairing.....	23.3	25.1	25.5	25.0	24.6	23.9	23.2	22.4	21.4	20.2	19.5	21.3	21.9	19.2	
Railroad equipment.....	60.7	61.6	59.6	58.7	56.0	51.4	47.7	46.9	48.8	53.9	56.9	57.7	51.4	50.9	
Other transportation equipment.....	10.2	10.5	10.4	10.5	9.7	9.0	9.7	10.4	10.9	11.0	10.7	10.6	10.1	9.0	
Instruments and related products.....	349.4	352.8	351.3	353.1	353.7	353.6	352.1	354.0	352.5	351.8	349.8	343.4	336.2	338.9	315.2
Laboratory, scientific, and engineering instruments.....	65.9	66.0	66.3	66.6	66.8	66.9	68.2	67.8	67.3	66.4	65.7	65.3	64.2	58.1	
Mechanical measuring and controlling instruments.....	101.0	100.2	100.3	100.2	99.9	97.9	97.3	96.4	97.4	96.7	94.9	94.3	93.0	83.9	
Optical instruments and lenses.....	18.6	18.4	18.4	18.2	17.6	17.3	16.9	17.1	16.9	16.4	15.8	15.3	15.8	14.0	
Surgical, medical, and dental instruments.....	45.8	45.1	45.3	45.1	44.9	44.6	44.7	44.1	43.7	43.6	42.8	42.0	43.1	41.5	
Ophthalmic goods.....	27.0	27.6	27.6	27.7	27.8	28.1	28.1	28.0	27.6	27.5	26.4	25.6	26.1	23.7	
Photographic apparatus.....	65.9	65.5	65.6	65.6	65.8	66.4	67.1	66.8	66.9	66.1	66.0	65.7	65.3	65.6	
Watches and clocks.....	28.6	28.5	29.6	30.3	30.8	30.9	31.7	32.3	33.1	33.1	31.8	31.0	31.4	28.4	
Miscellaneous manufacturing industries.....	494.2	508.2	498.7	496.5	493.9	489.0	480.0	494.1	516.9	522.3	517.7	501.2	496.5	459.9	
Jewelry, silverware, and plated ware.....	45.9	45.7	46.0	46.7	46.3	46.4	47.7	48.0	48.0	46.8	45.6	44.3	45.9	44.4	
Musical instruments and parts.....	18.6	18.6	19.1	19.6	19.6	19.7	19.9	19.8	19.8	19.1	18.4	15.5	18.0	16.4	
Confectionery and related products.....	98.1	93.2	88.1	81.8	77.2	73.3	79.4	95.2	100.3	99.2	94.0	86.1	84.5	81.7	
Pens, pencils, other office supplies.....	31.9	31.6	31.5	31.3	31.2	30.4	31.0	32.1	32.3	32.1	31.6	31.1	30.8	30.7	
Costume jewelry, buttons, notions.....	59.9	58.1	59.1	61.5	61.9	60.6	61.3	62.2	63.3	63.0	62.5	59.6	60.6	58.2	
Fabricated plastic products.....	94.9	94.8	95.4	95.5	96.6	96.0	96.2	97.1	97.1	96.3	93.6	91.5	92.6	84.0	
Other manufacturing industries.....	158.9	156.7	157.3	157.6	156.2	153.6	158.6	162.5	161.5	161.2	155.5	152.8	154.1	144.5	
Nondurable goods															
Food and kindred products.....	1,531.6	1,467.9	1,414.9	1,404.1	1,376.8	1,380.2	1,396.6	1,434.5	1,478.2	1,526.9	1,614.8	1,630.9	1,516.0	1,470.2	1,476.4
Meat products.....	303.9	297.2	292.6	294.8	298.2	302.0	305.7	305.0	294.6	291.1	311.0	306.3	302.1	307.0	
Dairy products.....	102.0	97.8	94.6	91.0	90.2	89.8	90.5	91.6	95.2	100.9	103.3	104.3	96.8	96.8	
Canning and preserving.....	205.3	184.7	185.9	167.3	166.7	169.5	182.9	211.7	260.1	252.0	350.3	253.7	223.0	220.4	
Grain-mill products.....	110.2	108.9	108.8	108.4	109.3	109.4	109.9	109.8	114.0	115.4	115.2	114.9	113.3	113.8	
Bakery products.....	260.4	286.1	287.0	286.1	286.8	285.9	287.9	290.0	290.1	289.2	290.0	286.8	285.2	284.3	
Sugar.....	25.7	25.1	25.1	24.5	25.7	34.8	41.3	45.4	43.1	29.2	27.7	26.2	31.0	31.4	
Confectionery and related products.....	70.1	69.5	70.2	71.8	72.3	72.7	78.0	78.8	79.1	77.7	73.6	68.3	73.5	75.4	
Beverages.....	220.9	211.1	206.3	201.5	198.1	200.4	205.5	210.5	215.2	220.6	220.3	217.9	209.1	207.0	
Miscellaneous food products.....	139.4	134.5	132.6	131.4	132.9	132.1	132.8	135.4	137.5	138.8	139.5	137.6	136.2	137.3	

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry <sup>1</sup>—Continued

[In thousands]																
Industry	1960							1959							Annual average	
	July <sup>1</sup>	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958	
<b>Manufacturing—Continued</b>																
<i>Nondurable goods—Continued</i>																
Tobacco manufactures.....	79.4	77.7	78.5	79.1	81.4	86.6	88.5	91.2	92.5	103.1	108.8	99.9	77.3	89.2	90.4	
Cigarettes.....	38.4	37.7	37.9	37.3	37.5	37.6	37.7	37.7	38.0	37.7	37.7	37.9	35.7	37.4	36.4	
Cigars.....	25.4	25.5	25.6	25.9	26.5	26.5	25.4	27.1	27.4	27.4	27.1	26.8	23.7	27.1	29.1	
Tobacco and snuff.....	6.2	6.2	6.2	6.3	6.4	6.4	6.4	6.4	6.4	6.4	6.7	6.8	6.8	6.8	6.8	
Tobacco stemming and redrying.....	7.7	9.1	9.4	11.9	16.2	19.1	20.0	20.7	31.6	37.3	28.4	9.1	18.1	18.4	18.4	
Textile-mill products.....	942.1	900.8	956.3	955.1	956.6	952.0	953.0	960.3	960.3	978.5	983.1	980.1	954.7	966.0	941.5	
Scouring and combing plants.....	5.5	5.4	5.3	5.2	5.6	5.6	5.6	5.4	5.3	5.6	5.7	5.8	5.8	5.8	5.8	
Yarn and thread mills.....	106.4	105.7	105.9	106.3	106.6	107.4	108.2	108.7	110.3	111.7	111.7	111.7	111.2	110.0	106.2	
Broad-woven fabric mills.....	393.7	392.9	395.3	395.6	396.9	394.9	396.1	398.1	398.9	400.4	399.8	399.8	395.7	398.5	396.9	
Narrow fabric and small wares.....	29.5	29.3	29.4	29.8	29.7	29.6	29.4	29.3	29.5	29.9	29.8	29.8	29.8	27.8	27.8	
Knitting mills.....	224.6	221.6	217.5	215.7	211.3	210.4	210.4	218.2	224.5	228.4	230.2	230.6	221.3	220.1	207.0	
Dyeing and finishing textiles.....	90.0	89.9	89.9	89.9	89.4	89.6	89.3	89.3	89.3	89.4	89.5	89.0	88.4	88.4	84.9	
Carpets, rugs, other floor coverings.....	44.1	44.9	45.8	46.2	46.7	46.5	46.2	46.2	46.7	46.5	46.5	46.5	45.6	46.6	44.8	
Hats (except cloth and millinery).....	10.2	10.1	9.6	10.2	9.9	10.3	10.4	10.2	9.6	10.2	10.3	10.3	9.8	10.1	10.1	
Miscellaneous textile goods.....	56.8	56.5	56.4	57.7	57.9	57.3	57.1	56.9	59.1	59.0	57.6	57.1	57.3	58.9	58.9	
Apparel and other finished textile products.....	1189.1	1216.8	1207.9	1,211.2	1,247.8	1,240.7	1,219.5	1,232.9	1,239.9	1,232.3	1,236.1	1,234.7	1,178.6	1,210.7	1,156.3	
Men's and boys' suits and coats.....	116.3	115.0	114.3	114.9	114.6	114.0	114.0	114.3	114.4	113.5	114.0	113.5	104.6	111.4	107.3	
Men's and boys' furnishings and work clothing.....	358.5	353.7	349.6	351.7	349.6	346.7	349.1	352.7	351.2	351.4	348.7	348.7	330.0	338.3	311.3	
Women's outerwear.....	330.2	328.1	335.7	338.0	335.1	346.2	349.8	348.0	336.0	334.6	348.8	348.8	330.5	344.7	339.7	
Women's, children's undergarments.....	118.5	118.4	120.0	121.6	121.6	119.8	121.5	124.0	124.0	122.6	120.6	120.6	112.7	118.9	114.1	
Millinery.....	12.7	14.9	17.8	22.8	22.2	19.1	18.3	17.0	18.6	18.7	19.6	18.6	18.6	18.5	17.9	
Children's outerwear.....	75.0	73.2	69.6	73.8	74.0	73.5	72.3	72.6	72.4	74.4	74.4	74.4	74.4	74.4	73.6	
Fur goods.....	7.2	6.9	6.6	6.6	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	
Miscellaneous apparel and accessories.....	61.8	59.6	60.2	60.0	59.2	57.7	60.9	62.7	64.2	64.2	62.9	62.9	62.9	62.9	62.9	
Other fabricated textile products.....	136.6	138.1	137.4	138.4	137.6	135.7	138.1	139.2	142.2	140.7	135.8	135.8	131.0	133.0	125.9	
Paper and allied products.....	559.3	566.8	562.7	562.3	560.0	559.9	561.3	564.1	564.4	566.2	571.8	566.2	561.3	569.9	547.1	
Pulp, paper, and paperboard mills.....	278.2	274.4	274.0	273.1	274.0	275.4	274.0	273.3	273.9	278.2	277.7	277.7	276.9	273.8	268.4	
Paperboard containers and boxes.....	152.5	151.7	152.2	152.3	152.4	152.6	152.6	152.7	158.0	158.0	158.0	158.0	151.7	153.5	149.6	
Other paper and allied products.....	136.1	136.6	136.1	134.6	133.5	133.3	133.9	133.4	134.3	135.6	133.9	133.9	132.7	132.6	128.1	
Printing, publishing, and allied industries.....	889.1	890.8	885.9	886.3	886.2	883.3	878.8	887.5	886.2	886.2	886.2	886.2	871.0	864.8	863.3	
Newspapers.....	331.3	329.4	327.7	327.2	325.7	324.9	329.6	329.6	329.6	327.6	326.3	324.7	323.6	322.0	314.4	
Periodicals.....	62.2	62.7	63.9	63.9	64.2	64.7	64.5	64.7	65.0	65.0	65.0	61.7	60.9	62.4	61.5	
Books.....	62.2	62.2	62.3	61.6	61.1	60.2	60.1	60.7	60.6	60.6	60.6	58.9	57.1	58.0	55.0	
Commercial printing.....	229.7	227.3	229.3	230.3	229.1	229.2	229.0	228.8	228.8	229.3	228.2	228.2	222.9	224.0	220.7	
Lithographing.....	68.5	68.4	68.6	68.1	67.3	65.5	66.9	67.9	67.5	67.3	66.2	66.6	66.3	66.3	65.7	
Greeting cards.....	21.4	20.6	20.5	20.1	19.9	19.6	21.3	22.0	22.3	22.1	21.3	20.9	20.8	20.8	20.0	
Bookbinding and related industries.....	48.5	48.0	48.0	47.8	47.5	46.8	46.8	46.8	46.9	47.6	47.7	47.2	45.8	46.2	44.8	
Miscellaneous publishing and printing services.....	67.0	67.3	66.0	67.2	68.5	67.9	68.0	68.6	68.4	68.7	67.8	68.0	68.0	68.0	68.4	
Chemicals and allied products.....	878.0	877.3	879.6	882.3	869.4	864.6	860.5	861.9	862.1	861.1	860.8	854.2	847.8	847.8	826.9	
Industrial inorganic chemicals.....	105.6	104.7	104.6	103.9	103.7	103.6	103.9	104.0	103.6	104.2	104.1	103.6	103.6	102.5	102.2	
Industrial organic chemicals.....	243.3	240.2	238.3	236.7	234.9	234.9	234.0	233.9	231.7	230.8	232.1	232.8	230.2	232.6	210.6	
Drugs and medicines.....	106.7	105.4	105.5	105.8	105.2	105.6	105.3	104.9	104.4	104.9	104.9	104.9	104.0	104.0	102.9	
Soap, cleaning and polishing preparations.....	53.2	52.8	52.7	52.7	52.4	51.8	51.7	51.4	51.5	51.9	51.6	51.6	51.0	51.0	49.3	
Paints, pigments, and fillers.....	78.5	77.8	77.3	76.8	76.9	76.3	76.4	76.4	77.1	77.7	77.6	76.2	75.5	75.0	73.0	
Gum and wood chemicals.....	8.0	7.9	7.8	7.7	7.9	7.8	7.8	7.7	7.8	7.8	7.7	7.8	7.7	7.8	7.7	
Fertilizers.....	35.7	44.1	48.8	39.4	37.2	35.9	35.0	34.1	34.8	35.0	32.4	31.6	36.9	36.6	35.6	
Vegetable and animal oils and fats.....	36.5	37.5	39.2	39.3	40.1	40.8	42.7	43.7	43.9	41.7	38.0	37.3	40.0	38.5	38.5	
Miscellaneous chemicals.....	109.8	109.2	108.1	107.1	106.3	104.7	106.2	108.2	107.2	107.2	106.1	105.3	104.6	101.0	101.0	
Products of petroleum and coal.....	230.7	232.0	231.9	232.4	232.2	232.4	231.9	232.2	231.7	229.7	231.7	229.9	237.8	233.4	228.2	
Petroleum refining.....	183.8	183.2	183.7	183.8	184.1	183.8	184.2	182.9	184.0	183.4	183.2	182.9	182.9	186.2	192.1	
Coke, other petroleum and coal products.....	48.2	48.7	48.7	48.4	48.3	48.1	48.0	48.8	45.7	46.3	46.7	48.2	47.2	46.1	46.1	
Rubber products.....	256.5	258.3	257.1	260.2	267.4	269.0	269.2	269.5	270.1	273.2	273.5	264.7	264.0	259.8	244.6	
Tires and inner tubes.....	103.7	103.4	104.5	104.0	104.0	103.3	103.5	103.5	106.1	107.0	106.0	106.4	106.7	101.6	100.8	
Rubber footwear.....	22.0	21.9	22.5	22.8	23.0	23.1	23.6	23.7	23.7	23.7	23.7	22.5	22.5	22.0	20.9	
Other rubber products.....	132.6	131.8	133.3	139.5	142.0	140.8	140.4	140.3	142.9	142.3	136.6	134.8	136.2	122.9	122.9	
Leather and leather products.....	361.1	365.5	357.6	359.3	370.4	370.9	370.9	372.5	372.6	372.0	376.1	379.7	375.1	372.2	367.2	
Leather: tanned, curried, and finished.....	34.5	34.0	34.1	34.4	34.8	35.6	35.8	35.9	36.2	36.9	37.1	36.9	37.1	37.1	37.9	
Industrial leather belting and packing.....	4.3	4.2	4.4	4.8	5.0	5.0	4.9	5.0	5.1	5.2	5.2	5.0	4.9	4.9	4.1	
Boot and shoe cut stock and findings.....	19.4	18.7	18.5	19.6	19.9	20.1	19.5	19.3	19.5	19.5	19.5	19.5	19.5	19.5	18.2	
Footwear (except rubber).....	245.2	243.8	245.0	246.8	248.0	249.8	249.4	249.4	249.4	249.4	249.4	249.4	249.4	249.4	249.4	
Luggage.....	16.0	15.8	15.6	15.6	15.1	15.0	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.0	
Handbags and small leather goods.....	30.3	30.2	30.9	33.5	33.3	31.7	32.4	33.6	34.1	33.2	32.2	30.2	31.2	30.9	29.9	
Gloves and miscellaneous leather goods.....	15.8	15.9	15.6	15.7	14.8	13.7	13.4	16.8	16.8	17.0	16.7	15.7	15.4	14.0	14.0	

See footnotes at end of table



TABLE A-2. Employees in nonagricultural establishments, by industry<sup>1</sup>—Continued

Industry	1960							1959							Annual average	
	July <sup>2</sup>	June <sup>2</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958	
Transportation and public utilities.....	3,933	3,942	3,924	3,917	3,900	3,887	3,882	3,940	3,912	3,910	3,927	3,922	3,949	3,902	3,963	
Transportation	2,565	2,590	2,585	2,579	2,570	2,553	2,549	2,602	2,571	2,568	2,574	2,562	2,589	2,559	2,531	
Interstate railroads.....	919.1	914.5	909.8	903.8	899.7	892.7	890.6	919.7	898.0	893.0	906.1	928.4	900.4	890.6	863.6	
Class I railroads.....	807.4	801.9	794.6	789.0	783.3	775.9	773.9	796.3	784.0	780.0	797.2	819.6	846.2	815.3	840.8	
Local railroads and buslines.....	91.4	91.3	91.4	91.4	91.2	90.9	91.2	91.4	91.8	91.7	92.1	92.0	92.3	92.3	96.4	
Trucking and warehousing.....	886.3	880.3	880.6	883.3	878.0	876.2	876.3	897.0	892.6	896.1	881.2	854.7	855.7	853.2	792.5	
Other transportation and services.....	693.5	698.6	697.6	692.1	684.7	681.1	684.2	694.2	688.4	685.2	694.1	687.2	680.1	683.3	678.5	
Buslines, except local.....	40.9	40.0	38.8	38.3	38.3	38.4	39.4	39.4	39.7	40.2	41.6	42.2	42.3	40.4	41.7	
Air transportation (common carrier).....	151.2	153.0	153.1	152.3	152.2	152.2	152.2	152.1	150.8	150.2	149.2	148.0	146.6	146.9	140.3	
Pipeline transportation (except natural gas).....	24.6	24.1	24.1	24.2	24.2	24.2	24.6	24.6	24.7	24.8	25.2	25.6	25.9	25.1	25.8	
Communication.....	750	745	741	740	738	737	736	739	741	741	746	748	750	743	771	
Telephone.....	708.1	704.0	702.6	700.2	699.2	698.0	698.0	701.1	702.9	702.8	707.7	710.8	711.7	705.5	732.4	
Telegraph.....	36.6	36.6	37.0	36.7	36.7	36.7	36.9	37.5	37.6	37.2	37.2	36.8	37.2	37.2	38.3	
Other public utilities.....	618	607	598	598	592	597	597	599	600	601	607	612	610	600	601	
Gas and electric utilities.....	582.8	574.6	574.2	568.5	574.0	574.0	575.7	575.7	576.7	577.8	583.6	588.2	585.7	576.6	578.5	
Electric light and power utilities.....	257.5	254.1	254.0	253.8	253.8	254.1	254.7	254.9	254.9	255.0	258.1	260.2	259.4	258.9	258.3	
Gas utilities.....	155.5	153.2	153.4	153.0	153.2	153.2	153.4	153.4	153.7	153.7	155.3	156.6	156.3	153.3	151.5	
Electric light and gas utilities combined.....	169.8	163.3	166.8	161.7	167.0	167.0	167.6	168.1	168.8	169.8	170.2	171.4	170.0	167.4	168.7	
Local utilities, not elsewhere classified.....	23.9	23.7	23.8	23.5	23.2	23.1	23.1	23.1	23.2	23.4	23.7	24.0	23.9	23.2	22.9	
Wholesale and retail trade.....	11,586	11,620	11,543	11,620	11,325	11,329	11,424	12,345	11,723	11,551	11,464	11,360	11,324	11,388	11,141	
Wholesale trade.....	3,140	3,128	3,111	3,120	3,111	3,114	3,113	3,135	3,141	3,121	3,067	3,081	3,069	3,070	3,013	
Wholesalers, full-service and limited-function.....	1,866.4	1,851.4	1,856.4	1,850.4	1,842.9	1,832.9	1,832.7	1,882.9	1,868.8	1,858.3	1,847.9	1,836.0	1,820.6	1,819.2	1,752.0	
Automotive.....	141.3	140.5	139.6	139.0	138.7	138.0	138.0	139.2	138.6	138.5	138.4	139.2	137.3	135.2	126.8	
Groceries, food specialties, beer, wines, and liquors.....	315.4	313.0	315.1	317.8	316.1	317.9	321.3	320.9	314.0	311.2	305.3	305.5	309.7	303.1		
Electrical goods, machinery, hardware, and plumbing equipment.....	458.4	455.2	455.5	455.0	454.8	453.8	456.4	455.1	454.5	452.9	453.8	452.0	448.0	439.2		
Other full-service and limited-function wholesalers.....	951.3	942.7	946.2	938.6	943.3	943.5	945.0	964.2	951.3	945.4	937.7	925.8	926.3	883.2		
Wholesale distributors, other.....	1,261.9	1,259.3	1,263.1	1,260.8	1,260.8	1,260.7	1,272.0	1,271.6	1,263.0	1,248.8	1,245.2	1,248.0	1,250.7	1,261.4		
Retail trade.....	8,446	8,492	8,432	8,500	8,214	8,215	8,311	9,190	8,582	8,430	8,367	8,279	8,255	8,315	8,128	
General merchandise stores.....	1,425.8	1,457.0	1,465.6	1,511.0	1,404.3	1,402.3	1,464.9	2,025.0	1,628.3	1,520.8	1,463.2	1,407.6	1,396.7	1,433.5	1,433.8	
Department stores and general mail-order houses.....	928.9	932.1	944.8	892.1	898.3	942.7	1,294.2	1,053.8	976.7	931.0	905.5	898.7	953.4	923.1		
Other general merchandise stores.....	528.1	525.5	520.8	512.2	504.0	522.2	730.7	574.5	544.1	532.2	502.1	498.0	530.1	508.8		
Food and liquor stores.....	1,664.0	1,657.4	1,648.7	1,649.0	1,633.6	1,634.8	1,629.7	1,663.3	1,645.6	1,627.0	1,612.1	1,604.2	1,600.3	1,613.6	1,595.8	
Grocery, meat, and vegetable markets.....	1,204.5	1,200.7	1,199.8	1,200.1	1,197.0	1,198.2	1,218.4	1,218.4	1,209.3	1,191.1	1,172.1	1,161.9	1,158.4	1,175.3	1,149.4	
Dairy product stores and dealers.....	227.3	222.8	220.2	214.9	214.9	217.1	217.2	218.3	218.3	217.2	218.3	218.3	217.4	217.4		
Other food and liquor stores.....	225.6	225.2	229.0	218.6	223.3	216.6	227.5	219.1	217.6	213.1	211.7	210.9	211.6	210.9		
Automotive and accessories dealers.....	823.0	826.3	819.0	815.0	801.2	801.1	790.7	814.8	803.8	802.2	796.1	800.6	798.9	791.0	764.5	
Apparel and accessories stores.....	592.8	628.4	626.7	679.6	584.4	584.4	609.1	744.0	634.3	621.2	605.1	568.8	572.1	606.0	592.1	
Other retail trade.....	3,940.2	3,923.0	3,872.7	3,845.5	3,790.3	3,792.1	3,807.3	3,943.0	3,860.5	3,858.8	3,887.2	3,897.6	3,887.0	3,820.4	3,738.4	
Furniture and appliance stores.....	396.4	399.0	397.4	398.1	396.7	397.3	417.0	405.1	398.5	396.6	390.7	389.5	389.5	380.2		
Drug stores.....	396.0	392.0	396.4	384.2	396.3	390.6	418.4	385.8	385.4	389.3	389.7	384.4	378.2	384.8		
Finance, insurance, and real estate.....	2,527	2,495	2,462	2,463	2,444	2,439	2,429	2,428	2,438	2,441	2,452	2,474	2,475	2,425	2,374	
Banks and trust companies.....	671.5	669.9	663.2	661.9	657.5	657.5	652.2	653.2	650.4	647.5	645.4	651.1	649.8	638.4	618.3	
Security dealers and exchanges.....	100.5	99.9	999.9	99.7	99.2	97.9	97.9	97.7	96.9	96.8	96.7	98.0	97.4	94.5	84.6	
Insurance carriers and agents.....	930.4	922.3	922.3	919.9	917.3	910.3	913.6	913.6	910.8	908.4	909.9	915.4	914.1	904.0	896.0	
Other finance agencies and real estate.....	793.0	783.5	777.4	762.9	764.9	768.5	773.7	779.4	788.7	796.7	809.8	813.4	787.8	779.5		
Service and miscellaneous.....	6,721	6,746	6,717	6,644	6,511	6,484	6,474	6,547	6,593	6,614	6,617	6,582	6,593	6,525	6,395	
Hotels and lodging places.....	625.3	497.1	470.3	458.6	459.6	462.7	463.4	470.4	476.1	476.1	476.1	476.1	476.1	476.1	476.1	
Personal services.....	314.2	311.5	308.4	304.6	305.7	307.2	309.0	310.6	312.2	313.4	315.8	317.5	310.9	312.7		
Laundries.....	179.9	179.4	177.4	169.3	170.0	171.9	178.4	174.7	174.4	174.4	165.6	169.3	170.6	167.4		
Cleaning and dyeing plants.....	190.0	190.3	189.7	175.3	178.0	178.9	179.8	179.8	185.6	190.0	194.2	195.9	192.9	189.8		
Motion pictures.....	190.0	190.3	189.7	175.3	178.0	178.9	179.8	179.8	185.6	190.0	194.2	195.9	192.9	189.8		
Government.....	8,136	8,405	8,449	8,553	8,536	8,543	8,288	8,635	8,533	8,274	8,158	7,813	7,837	8,127	7,893	
Federal <sup>3</sup> .....	2,195	2,204	2,212	2,234	2,231	2,153	2,151	2,492	2,162	2,168	2,164	2,153	2,190	2,197	2,191	
Executive.....	2,176.8	2,184.6	2,206.8	2,203.6	2,203.6	2,123.2	2,123.6	2,464.5	2,164.7	2,160.9	2,136.2	2,155.2	2,162.0	2,199.4	2,192.8	
Department of Defense.....	922.8	917.1	916.5	919.0	920.2	921.3	924.6	928.3	931.4	934.4	941.5	949.6	941.3	960.3		
Post Office Department.....	560.0	553.3	553.0	551.8	553.0	553.6	563.4	557.5	551.2	550.6	551.3	549.4	572.9	562.8		
Other agencies.....	693.8	714.2	737.3	732.8	732.8	732.8	732.8	732.8	732.8	732.8	732.8	732.8	732.8	732.8		
Legislative.....	22.8	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.7	22.7	22.2	22.1	
Judicial.....	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.7	
State and local <sup>4</sup> .....	5,941	6,201	6,237	6,319	6,303	6,330	6,135	6,143	6,369	6,106	5,944	5,630	5,647	5,930	5,702	
State.....	1,570.1	1,578.8	1,572.8	1,564.1	1,559.8	1,559.8	1,550.2	1,555.4	1,555.6	1,550.6	1,537.9	1,467.9	1,460.1	1,524.3	1,470.8	
Local.....	4,330.1	4,628.0	4,659.4	4,749.1	4,749.1	4,770.2	4,584.0	4,588.9	4,809.4	4,555.8	4,406.5	4,162.4	4,195.7	4,405.7	4,231.1	
Education.....	2,852.9	2,878.5	2,887.4	2,902.0	2,902.0	2,902.0	2,947.3	2,948.7	2,948.0	2,906.4	2,746.1	2,330.0	2,335.5	2,721.5	2,663.7	
Other.....	3,348.1	3,258.3	3,231.8	3,215.2	3,190.0	3,190.0	3,190.0	3,194.3	3,193.5	3,200.0	3,248.0	3,300.3	3,311.3	3,308.5	3,138.2	

<sup>1</sup> Beginning with the August 1958 issue, figures for 1956-58 differ from those previously published because of the adjustment of the employment estimates to 1st quarter 1957 benchmark levels indicated by data from government social insurance programs. Statistics from 1957 forward are subject to revision when new benchmarks become available.

These series are based upon establishment reports which cover all full- and part-time employees in nonagricultural establishments who worked during, or received pay for, any part of the pay period ending nearest the 15th of the month. Therefore, persons who worked in more than 1 establishment during the reporting period are counted more than once. Proprietors, self-employed persons, unpaid family workers, and domestic servants are excluded.

<sup>2</sup> Preliminary.

<sup>3</sup> Data relate to civilian employees who worked on, or received pay for, the last day of the month.

<sup>4</sup> State and local government data exclude, as nominal employees, elected officials of small local units and paid volunteer firemen.

Source: U.S. Department of Labor, Bureau of Labor Statistics for all series except those for the Federal Government, which is prepared by the U.S. Civil Service Commission, and that for Class I railroads which is prepared by the U.S. Interstate Commerce Commission.



TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>

(In thousands)

Industry	1960							1959							Annual average	
	July <sup>1</sup>	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958	
Mining		532	532	533	524	527	518	527	519	481	479	494	562	532	572	
Metal		78.7	80.0	79.3	77.6	73.4	60.5	57.2	54.9	33.7	34.0	45.1	80.1	65.1	76.5	
Iron		28.3	30.5	29.5	28.8	28.6	28.4	28.2	25.9	8.3	5.3	6.0	30.2	22.7	26.1	
Copper		26.1	25.6	25.7	24.8	21.1	8.5	5.6	5.5	6.1	6.4	14.4	23.3	18.0	23.4	
Lead and zinc		9.4	9.7	10.1	10.2	10.1	10.1	9.9	9.8	9.3	9.3	10.4	10.2	10.0	10.5	
Anthracite		9.9	10.5	11.5	12.4	13.9	13.9	14.1	14.3	14.3	13.9	13.8	15.5	14.6	18.4	
Bituminous coal		144.1	147.7	146.5	152.0	154.1	154.4	155.1	144.9	128.5	119.0	118.6	152.5	149.2	173.8	
Crude-petroleum and natural-gas production		203.3	198.3	198.5	197.7	199.8	202.7	208.3	209.6	209.4	215.7	219.0	218.6	210.2	211.1	
Petroleum and natural-gas production (except contract services)		103.5	101.2	101.8	102.5	103.3	103.9	104.6	104.8	105.2	107.6	109.3	108.4	106.1	112.9	
Nonmetallic mining and quarrying		96.2	95.9	93.1	83.9	85.3	86.1	92.6	95.3	95.3	96.4	97.3	95.5	92.5	91.9	
Contract construction		2,565	2,420	2,190	1,914	1,989	2,047	2,289	2,445	2,551	2,637	2,699	2,632	2,372	2,278	
Nonbuilding construction		665	513	424	340	353	360	439	507	554	581	606	606	506	497	
Highway and street construction		258.3	256.6	196.2	136.3	142.9	145.2	195.2	245.0	283.8	303.4	320.1	315.6	245.4	231.8	
Other nonbuilding construction		276.4	256.8	227.4	203.3	210.4	214.9	243.8	261.8	269.9	277.6	285.6	290.1	260.5	265.1	
Building construction		2,000	1,907	1,766	1,574	1,636	1,687	1,850	1,938	1,967	2,056	2,093	2,026	1,866	1,781	
General contractors		714.7	675.1	609.5	513.4	542.2	564.0	629.0	667.6	703.8	729.2	750.9	737.2	692.4	658.1	
Special-trade contractors		1,285.6	1,232.0	1,156.3	1,060.3	1,093.6	1,123.2	1,220.9	1,270.4	1,263.4	1,326.6	1,342.4	1,288.4	1,173.2	1,122.6	
Plumbing and heating		232.4	246.7	235.4	224.1	230.3	239.3	251.5	256.3	265.2	270.5	271.9	264.6	252.8	247.0	
Painting and decorating		215.3	201.3	176.3	160.3	169.3	163.1	184.6	201.3	207.4	218.8	225.4	218.3	181.7	183.3	
Electrical work		147.8	139.4	133.3	128.6	132.0	134.4	138.8	143.0	144.5	148.4	147.9	142.8	138.3	136.2	
Other special-trade contractors		670.1	644.6	611.3	547.3	672.0	586.4	646.0	669.8	676.3	688.9	697.2	662.7	630.4	594.1	
Manufacturing		12,155	12,336	12,292	12,334	12,435	12,494	12,449	12,466	12,274	12,261	12,373	12,175	12,433	12,237	
Durable goods		6,886	7,057	7,084	7,123	7,205	7,268	7,230	7,173	5,922	6,790	6,847	6,679	7,161	6,955	
Non-durable goods		5,269	5,279	5,208	5,211	5,230	5,226	5,219	5,293	5,352	5,471	5,526	5,494	5,272	5,282	
Durable goods																
Ordinance and accessories		60.7	72.2	73.0	73.8	74.9	74.7	74.3	74.0	72.9	73.4	73.5	71.1	72.2	68.4	
Lumber and wood products (except furniture)		608.7	620.1	592.5	568.6	555.7	560.6	561.4	563.6	569.2	612.0	619.7	628.4	627.0	591.1	
Logging camps and contractors		120.3	101.8	86.1	83.9	85.5	85.5	86.5	86.5	90.5	101.2	101.7	107.8	108.6	92.3	
Sawmills and planing mills		296.8	288.8	281.6	275.1	276.7	277.0	286.3	294.5	300.0	304.2	305.2	302.3	291.5	283.6	
Millwork, plywood, and prefabricated structural wood products		112.5	111.7	110.9	109.0	110.5	110.3	113.6	116.7	120.8	123.6	125.5	125.4	117.7	106.5	
Wooden containers		40.8	40.8	39.7	38.2	38.3	38.3	39.1	38.6	39.7	39.7	39.7	41.0	40.2	40.8	
Miscellaneous wood products		49.7	49.4	50.3	49.5	49.6	49.3	49.2	50.0	50.3	50.5	50.5	49.8	49.4	49.0	
Furniture and fixtures		320.7	326.3	324.3	327.2	326.9	327.6	327.4	327.8	327.2	328.6	329.1	329.5	321.2	297.3	
Household furniture		240.3	240.3	242.7	242.9	244.0	244.0	245.9	246.6	247.2	246.3	242.2	237.9	240.8	230.1	
Office, public building, and professional furniture		38.7	37.6	38.0	37.7	37.2	36.8	36.7	36.6	37.5	37.5	37.7	35.9	35.9	34.2	
Partitions, shelving, lockers, and fixtures		28.0	26.8	27.2	26.7	27.0	27.4	27.1	26.7	26.7	26.9	26.6	26.8	25.6	25.6	
Screens, blinds, and miscellaneous furniture and fixtures		19.3	19.0	19.3	19.6	19.4	19.2	18.1	17.3	19.2	20.1	19.4	19.9	18.9	17.4	
Stone, clay, and glass products		455.3	455.4	448.2	443.0	445.2	442.0	452.4	457.1	458.2	469.2	468.3	463.5	449.1	417.8	
Flat glass		25.5	26.6	27.5	30.2	32.2	32.2	32.3	32.1	32.6	30.4	29.9	28.8	28.7	23.5	
Glass and glassware, pressed or blown		92.9	90.5	89.3	88.9	87.5	84.7	85.9	87.2	83.0	86.6	87.4	85.7	84.7	80.5	
Glass products made of purchased glass		13.6	13.7	13.7	14.1	14.5	14.5	14.5	15.3	15.6	15.5	15.9	14.8	14.0	13.2	
Cement, hydraulic		35.2	34.5	33.7	31.6	31.0	32.5	33.9	34.3	33.7	35.8	36.3	36.0	34.4	34.6	
Structural clay products		65.5	65.9	64.5	62.2	62.6	63.1	66.0	67.2	67.5	67.5	68.7	68.5	65.5	63.4	
Pottery and related products		41.9	41.7	42.3	42.5	42.4	41.9	42.0	43.0	43.1	43.5	42.8	42.4	41.3	37.6	
Concrete, gypsum, and plaster products		95.6	93.2	91.0	86.8	87.7	87.8	91.7	94.0	97.2	101.0	101.7	99.9	94.3	88.9	
Cut-stone and stone products		15.9	15.6	15.4	14.9	15.0	14.9	15.3	15.6	15.9	16.0	16.1	15.9	15.6	15.7	
Miscellaneous nonmetallic mineral products		60.3	60.9	70.8	71.8	72.5	71.0	70.5	68.4	59.6	70.9	70.4	71.5	60.6	62.3	
Primary metal industries		926.5	908.9	902.0	1,019.8	1,042.6	1,051.8	1,048.3	1,038.8	978.0	902.3	911.0	928.0	1,038.4	916.4	
Blast furnaces, steel works, and rolling mills		470.8	495.3	510.6	526.4	531.6	531.6	527.7	493.2	118.8	123.3	132.4	521.2	416.6	438.5	
Iron and steel foundries		189.8	188.8	194.0	194.7	196.8	197.7	197.6	183.2	194.2	195.6	194.1	197.7	192.2	167.4	
Primary smelting and refining of non-ferrous metals		46.8	46.1	47.2	45.4	42.8	40.7	37.4	32.4	32.9	33.3	43.2	44.5	40.0	43.2	
Secondary smelting and refining of non-ferrous metals		8.6	8.9	9.1	9.3	9.3	9.4	9.2	8.8	8.8	8.8	9.4	9.4	9.1	8.2	
Rolling, drawing, and alloying of non-ferrous metals		85.4	84.2	85.6	87.0	87.4	88.1	89.1	89.1	89.9	90.5	89.8	92.2	89.2	80.6	
Nonferrous foundries		50.3	49.6	51.2	53.7	55.2	55.4	55.2	54.3	55.7	54.3	52.9	52.5	53.3	49.4	
Miscellaneous primary metal industries		117.2	119.7	122.1	126.1	128.7	125.4	122.6	114.0	102.0	105.2	106.2	120.9	116.0	108.4	
Fabricated metal products (except ordnance, machinery, and transportation equipment)		823.5	841.1	836.5	833.8	833.3	856.6	840.9	799.9	811.8	841.4	815.2	846.9	831.0	795.8	
Tin cans and other tinware		55.9	54.3	51.7	51.3	50.3	50.8	49.1	48.2	49.1	57.7	56.6	55.0	51.9	50.6	
Cutlery, handtools, and hardware		103.7	104.4	105.4	109.1	111.7	111.9	110.2	95.0	101.9	110.0	106.3	104.4	106.2	100.1	
Heating apparatus (except electric) and plumbers' supplies		88.0	88.1	88.5	88.5	89.5	89.0	86.8	89.2	93.1	94.0	92.9	89.2	89.5	83.3	
Fabricated structural metal products		208.4	204.4	199.7	200.6	200.7	199.5	199.3	192.8	181.4	190.2	195.6	221.5	203.4	220.0	
Metal stamping, coating, and engraving		192.5	192.9	193.7	201.9	207.1	202.4	195.2	179.5	193.9	195.4	177.1	189.0	187.8	169.4	
Lighting fixtures		38.2	37.0	38.6	39.5	39.8	39.4	39.0	38.6	40.5	40.4	38.2	36.9	38.5	34.2	
Fabricated wire products		45.3	45.9	45.6	48.4	49.2	48.7	47.7	45.8	43.4	43.5	41.9	44.9	45.4	41.7	
Miscellaneous fabricated metal products		109.1	109.5	112.6	114.5	115.0	114.9	112.6	110.6	108.5	108.9	106.6	109.0	108.9	96.5	

See footnotes at end of table.

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>—Continued

Industry	1960												1959							Annual average	
	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958						
Manufacturing—Continued																					
Durable goods—Continued																					
Machinery (except electrical).....	1,131.3	1,155.5	1,159.3	1,176.4	1,186.1	1,191.0	1,178.8	1,166.0	1,135.9	1,140.8	1,167.1	1,137.7	1,149.4	1,134.1	1,030.3						
Engines and turbines.....	63.8	64.5	65.8	68.2	68.4	66.5	66.3	66.0	66.0	67.1	68.1	65.2	66.4	65.9	60.7						
Agricultural machinery and tractors.....	102.9	101.7	105.5	110.9	112.3	110.1	106.5	94.5	103.9	119.8	111.8	124.6	112.4	94.7	94.7						
Construction and mining machinery.....	87.5	89.9	91.4	91.9	91.4	89.9	88.7	84.7	85.6	91.6	90.7	94.1	89.6	82.4	82.4						
Metalworking machinery.....	196.1	195.7	196.4	195.1	192.1	190.7	180.7	186.7	184.0	182.1	176.1	175.5	175.6	162.1	162.1						
Special industry machinery (except metalworking machinery).....	124.0	123.5	123.1	122.6	122.3	121.4	120.7	120.2	118.2	119.1	116.3	114.9	114.0	108.5	108.5						
General industrial machinery.....	146.8	146.5	147.5	149.0	149.8	146.4	146.2	146.0	146.6	146.1	146.5	143.1	141.9	138.1	138.1						
Office and store machines and devices.....	93.0	92.3	92.9	92.4	92.1	92.6	92.7	92.0	91.6	90.4	88.6	87.7	89.7	84.0	84.0						
Service industry and household machines.....	143.3	146.9	148.4	146.0	149.2	145.4	140.9	136.3	138.4	138.3	138.0	138.3	138.1	123.2	123.2						
Miscellaneous machinery parts.....	198.6	198.3	205.4	210.0	213.4	212.8	212.3	209.5	211.4	211.6	204.5	204.8	206.0	185.6	185.6						
Electrical machinery.....	843.0	858.4	855.1	860.4	878.7	890.0	892.1	891.9	881.6	860.3	888.4	849.6	835.9	839.7	760.1						
Electrical generating, transmission, distribution, and industrial apparatus.....	277.3	279.3	283.1	287.2	289.0	287.8	284.7	275.4	281.6	286.5	281.3	277.8	273.7	247.8	247.8						
Electrical appliances.....	29.3	29.1	29.5	30.4	30.0	29.8	29.8	29.9	30.6	30.0	28.4	27.3	28.2	25.4	25.4						
Insulated wire and cable.....	21.8	22.0	21.8	22.2	22.5	22.9	22.7	22.2	22.2	21.5	21.1	20.4	21.6	19.3	19.3						
Electrical equipment for vehicles.....	54.6	54.3	55.0	56.0	56.9	60.9	60.3	58.5	54.9	57.9	56.7	45.7	52.9	54.4	47.0						
Electric lamps.....	25.4	25.8	25.9	25.9	25.9	25.9	25.8	25.8	25.8	25.8	24.8	24.0	23.8	23.9	22.5						
Communication equipment.....	413.7	408.8	408.8	418.7	426.3	429.5	433.2	435.8	437.2	430.2	412.8	397.9	401.6	355.4	355.4						
Miscellaneous electrical products.....	36.3	35.8	35.3	35.3	35.3	35.9	37.2	37.8	36.3	38.7	36.3	35.8	36.3	32.7	32.7						
Transportation equipment.....	1,100.4	1,127.2	1,173.6	1,187.1	1,221.2	1,244.8	1,238.7	1,172.1	1,026.0	1,207.8	1,199.8	1,132.0	1,207.4	1,189.5	1,124.0						
Motor vehicles and equipment.....	615.5	615.8	622.9	651.9	675.2	687.7	692.7	639.0	622.5	696.5	619.7	586.3	574.2	480.0	480.0						
Aircraft and parts.....	345.6	388.0	398.1	407.1	411.7	416.1	422.1	428.8	435.2	445.3	444.5	448.6	451.1	479.3	479.3						
Aircraft.....	213.8	223.5	229.1	233.5	237.5	240.8	243.7	249.4	254.0	262.7	263.7	264.8	268.1	291.5	291.5						
Aircraft engines and parts.....	66.9	82.4	83.3	83.9	83.2	83.2	84.9	85.6	85.8	85.6	83.7	86.4	86.5	89.0	89.0						
Aircraft propellers and parts.....	2.7	8.5	8.5	8.6	8.6	8.5	8.4	8.3	8.7	8.9	8.9	9.2	9.1	12.2	12.2						
Other aircraft parts and equipment.....	72.2	73.6	77.2	81.1	82.6	83.5	85.1	85.5	86.7	88.1	88.2	88.2	87.4	88.7	88.7						
Ship and boat building and repairing.....	112.6	114.7	113.1	109.8	108.7	120.8	116.3	117.5	107.0	107.1	116.5	120.5	118.5	121.4	121.4						
Shipbuilding and repairing.....	92.6	93.0	90.9	88.1	87.4	100.2	96.2	96.9	88.6	89.8	100.1	102.3	96.9	105.1	105.1						
Boatbuilding and repairing.....	20.0	21.7	22.2	21.7	21.3	20.6	20.1	19.4	18.4	17.3	16.4	18.2	18.9	16.3	16.3						
Railroad equipment.....	45.5	46.7	44.7	44.0	41.5	37.2	33.3	32.2	34.0	38.8	42.3	43.2	37.1	36.1	36.1						
Other transportation equipment.....	8.0	8.4	8.3	8.4	7.7	6.9	7.7	8.6	9.1	9.1	9.0	8.8	8.3	7.3	7.3						
Instruments and related products.....	224.2	227.2	227.8	229.8	230.5	231.3	230.5	232.2	231.9	231.9	230.7	224.0	229.8	222.3	205.8						
Laboratory, scientific and engineering instruments.....	35.6	35.8	36.0	36.0	36.1	36.2	37.4	37.2	36.9	36.5	35.1	35.5	35.1	31.8	31.8						
Mechanical measuring and controlling instruments.....	66.2	66.4	66.8	66.9	67.3	65.9	65.0	64.4	65.8	65.1	63.5	62.9	62.4	55.8	55.8						
Optical instruments and lenses.....	12.8	12.7	12.7	12.5	12.1	12.1	11.5	12.0	11.6	11.2	10.8	10.3	10.7	9.4	9.4						
Surgical, medical, and dental instruments.....	30.5	30.2	30.4	30.2	30.1	29.7	30.0	29.5	29.0	29.2	28.4	27.7	28.7	27.3	27.3						
Ophthalmic goods.....	21.0	21.5	21.7	21.9	22.1	22.3	22.4	22.3	22.0	21.9	20.9	20.1	20.6	18.4	18.4						
Photographic apparatus.....	38.6	38.7	38.7	38.8	39.0	39.6	40.5	40.8	39.8	40.9	39.7	39.5	39.3	39.7	39.7						
Watches and clocks.....	22.5	22.4	23.5	24.2	24.6	24.7	25.4	26.0	26.8	26.8	25.6	24.8	25.6	22.9	22.9						
Miscellaneous manufacturing industries.....	391.2	404.9	397.3	395.1	391.9	387.5	379.1	363.0	414.8	420.0	416.6	400.7	380.2	386.6	361.0						
Jewelry, silverware, and plated ware.....	36.5	36.3	36.5	37.1	36.7	36.6	37.8	38.2	38.1	37.3	36.2	34.5	36.1	34.5	34.5						
Musical instruments and parts.....	15.2	15.8	15.7	16.0	16.2	16.3	16.7	16.7	16.7	16.7	16.0	15.3	15.3	13.6	13.6						
Toys and sporting goods.....	83.2	78.5	73.4	67.2	62.7	59.0	64.6	60.7	55.9	55.1	50.1	46.1	42.6	37.7	37.7						
Pens, pencils, other office supplies.....	23.8	23.6	23.4	23.2	23.1	22.4	22.9	24.1	24.3	24.1	23.5	22.9	22.8	22.3	22.3						
Costume jewelry, buttons, notions.....	48.2	46.8	47.9	50.0	50.0	48.7	49.4	49.9	50.6	50.7	50.4	47.7	48.8	46.4	46.4						
Fabricated plastics products.....	74.3	74.2	74.9	75.0	76.2	75.7	76.3	77.0	77.2	76.4	73.4	71.6	72.9	64.8	64.8						
Other manufacturing industries.....	123.7	122.6	123.3	123.4	122.6	120.4	125.3	128.2	127.2	127.0	121.8	118.6	120.3	111.9	111.9						
Nondurable goods																					
Food and kindred products.....	1,071.7	1,013.2	967.4	969.5	933.7	938.6	954.0	989.5	1,031.8	1,080.1	1,162.0	1,176.0	1,061.7	1,025.3	1,035.3						
Meat products.....	242.2	235.7	232.1	233.8	237.2	240.6	244.8	243.6	233.4	229.0	249.3	245.2	240.6	243.5	243.5						
Dairy products.....	70.3	66.7	63.7	60.7	59.6	59.3	60.0	60.8	63.6	67.7	68.9	71.0	72.0	65.5	65.7						
Canning and preserving.....	170.6	150.8	152.0	133.6	134.1	136.5	149.6	177.9	225.9	316.2	314.8	218.6	189.2	186.6	186.6						
Grain-mill products.....	76.5	75.0	74.3	73.9	74.1	74.7	75.2	74.8	77.7	79.9	79.6	78.9	77.9	79.5	79.5						
Bakery products.....	163.8	160.9	161.7	160.8	160.9	160.6	162.7	165.7	165.7	165.0	165.6	162.5	162.1	164.9	164.9						
Sugar.....	20.4	19.8	20.8	19.3	20.3	20.4	20.4	20.4	20.4	20.4	22.2	20.5	20.5	25.9	25.9						
Confectionery and related products.....	55.4	54.8	55.4	57.2	57.8	58.4	62.9	64.0	64.6	63.3	59.4	54.2	59.4	61.6	61.6						
Beverages.....	118.4	112.2	108.9	104.9	103.2	104.1	108.8	113.4	117.6	120.7	118.4	115.8	111.8	112.4	112.4						
Miscellaneous food products.....	96.6	91.5	89.5	86.5	85.1	90.4	90.2	92.6	94.7	95.2	93.7	94.0	93.5	94.2	94.2						
Tobacco manufactures.....	69.6	67.9	68.3	69.1	71.2	76.4	78.2	80.9	82.2	92.8	98.4	89.7	67.2	78.9	80.1						
Cigarettes.....	33.3	32.5	32.6	32.1	32.4	32.5	32.5	32.5	32.5	32.5	32.6	32.8	30.5	32.2	31.5						
Cigars.....	28.8	28.7	24.0	24.1	24.8	23.8	25.5	25.7	23.8	25.5	25.2	24.1	25.4	27.4	27.4						
Tobacco and snuff.....	5.2	5.2	5.2	5.3	5.4	5.3	5.3	5.4	5.4	5.6	5.7	5.7	5.5	5.4	5.4						
Tobacco stemming and redrying.....	4.6	6.9	7.3	8.7	13.6	16.6	17.6	18.9	29.1	54.7	26.0	6.9	15.8	15.8	15.8						

See footnotes at end of table.

TABLE A-3. Production of nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>—Continued

	[In thousands]															
Industry	1960							1959							Annual average	
	July <sup>1</sup>	June <sup>2</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958	
Manufacturing—Continued																
Nondurable goods—Continued																
Textile-mill products.....	847.5	866.0	892.9	861.4	863.0	859.5	859.7	867.4	875.6	885.3	889.6	896.7	872.1	873.9	850.8	
Scouring and combing plants.....		5.0	4.9	4.8	4.8	5.1	5.1	4.9	4.8	5.1	5.2	5.3	5.2	5.0	4.7	
Yarn and thread mills.....		97.5	97.6	97.7	98.0	98.3	98.0	96.9	100.4	101.9	103.2	103.0	102.7	101.5	96.7	
Broad-woven fabric mills.....		365.3	364.7	366.9	368.8	366.8	368.0	369.9	370.2	371.5	371.5	371.5	367.7	370.5	372.4	
Narrow fabrics and smallwares.....		25.8	25.6	25.8	26.1	26.0	26.1	25.8	25.8	26.8	26.8	26.2	26.1	25.9	23.9	
Knitting mills.....		203.6	200.7	196.7	195.0	191.2	189.7	195.7	203.6	207.5	209.5	206.7	200.7	199.7	186.8	
Dyeing and finishing textiles.....		77.7	77.7	77.8	76.6	77.3	77.4	77.1	77.3	77.5	77.5	76.8	76.4	76.6	78.7	
Carpets, rugs, other floor coverings.....		36.3	37.2	38.0	38.4	39.0	38.8	38.6	38.5	39.1	38.8	38.0	38.0	38.9	36.7	
Hats (except cloth and millinery).....		8.9	8.9	8.3	8.9	8.6	9.1	9.2	8.9	8.4	9.0	9.1	8.7	8.9	9.0	
Miscellaneous textile goods.....		45.9	45.6	45.4	46.7	47.2	46.5	46.4	46.1	48.4	48.6	47.1	46.6	46.9	43.9	
Apparel and other finished textile products.....	1090.3	1087.0	1079.1	1,082.4	1,118.2	1,111.1	1,090.8	1,102.5	1,107.0	1,100.0	1,106.2	1,102.7	1,047.5	1,080.0	1,027.0	
Men's and boys' suits and coats.....		105.0	103.5	102.3	103.1	102.5	102.2	102.4	102.6	101.7	102.4	101.8	93.1	96.5	95.0	
Men's and boys' furnishings and work clothing.....		327.1	322.0	318.8	320.9	319.2	316.2	318.4	321.1	320.4	320.8	318.6	309.0	308.8	293.9	
Women's outerwear.....		295.4	293.0	300.9	322.6	319.8	311.1	313.8	311.3	299.5	306.2	311.3	293.8	308.0	302.7	
Women's, children's undergarments.....		105.5	105.5	107.5	108.9	108.6	106.8	108.7	111.1	111.9	109.7	107.7	100.0	106.2	101.9	
Millinery.....		10.9	13.0	15.9	20.7	20.1	17.1	16.2	15.0	16.4	16.4	17.4	16.4	16.3	15.7	
Children's outerwear.....		67.2	65.5	61.9	66.1	66.2	65.7	64.5	64.8	64.3	66.2	66.0	66.0	66.3	65.1	
Fur goods.....		5.3	5.2	4.9	4.8	5.0	5.0	6.8	7.3	7.7	7.4	6.4	7.8	7.1	8.2	
Miscellaneous apparel and accessories.....		55.8	53.8	54.4	54.1	53.3	51.9	54.8	56.8	57.9	58.0	56.8	51.8	54.4	50.9	
Other fabricated textile products.....		114.8	116.7	115.8	117.0	116.4	114.8	116.9	117.0	121.0	119.4	114.7	110.1	113.7	103.6	
Paper and allied products.....	443.8	451.5	449.2	448.3	446.4	445.8	447.2	450.5	452.3	453.6	459.7	454.2	449.0	448.6	439.5	
Pulp, paper, and paperboard mills.....		225.6	222.8	222.5	221.5	221.6	223.2	225.2	222.2	222.1	227.0	226.6	225.9	223.1	220.7	
Paperboard containers and boxes.....		121.9	121.5	121.3	121.8	121.7	121.4	122.2	127.1	127.4	127.3	123.9	120.8	122.9	119.6	
Other paper and allied products.....		104.0	104.9	104.5	103.1	102.5	102.6	103.1	103.0	104.1	105.4	103.8	102.3	102.6	99.0	
Printing, publishing, and allied industries.....	563.7	569.7	566.8	567.5	567.6	565.1	562.4	570.6	570.2	569.8	569.8	568.2	552.1	557.5	545.4	
Newspapers.....		164.3	164.0	162.9	162.6	161.5	161.5	165.8	163.6	164.1	163.8	161.0	159.9	161.0	157.2	
Periodicals.....		26.6	27.0	27.7	27.6	27.4	27.4	27.2	27.5	27.6	27.4	26.0	25.8	26.6	25.8	
Books.....		37.7	37.4	37.6	37.2	37.0	36.6	36.4	36.3	36.3	37.0	36.4	34.4	35.5	33.7	
Commercial printing.....		184.2	182.8	184.6	185.4	184.4	183.0	183.4	184.4	183.8	183.4	179.0	178.8	180.2	177.5	
Lithography.....		51.9	51.8	52.1	51.5	50.7	48.9	50.3	51.5	51.1	51.0	50.1	49.7	50.1	49.7	
Greeting cards.....		15.4	14.6	14.5	14.0	13.7	13.5	15.4	16.7	16.1	16.3	15.6	15.3	15.0	14.2	
Bookbinding and related industries.....		38.2	37.7	37.6	37.6	37.2	36.4	36.8	36.7	37.5	37.7	37.2	36.0	36.3	35.0	
Miscellaneous publishing and printing services.....		51.4	51.8	50.5	51.7	53.2	53.1	53.3	53.8	53.3	53.2	52.9	52.7	52.8	52.6	
Chemicals and allied products.....	543.2	541.1	546.7	551.0	540.5	537.3	535.9	537.1	539.0	540.0	539.9	532.1	526.6	530.9	512.2	
Industrial inorganic chemicals.....		69.6	69.2	69.3	68.7	68.8	69.1	69.6	69.7	69.2	69.4	69.2	68.9	68.4	67.3	
Industrial organic chemicals.....		211.6	210.0	208.9	208.7	207.7	208.0	206.8	206.9	206.7	206.0	207.8	205.7	203.3	191.5	
Drugs and medicines.....		57.6	56.6	56.7	57.3	57.0	57.6	57.3	56.9	56.9	57.6	57.5	57.2	57.1	57.6	
Soap, cleaning and polishing preparations.....		31.3	30.8	30.8	30.7	30.4	30.2	30.2	30.1	30.4	30.8	30.6	30.2	30.3	30.1	
Paints, pigments, and fillers.....		46.6	46.3	46.1	45.7	45.9	45.8	45.8	45.8	46.6	46.7	46.9	45.6	45.4	43.7	
Gum and wood chemicals.....		6.5	6.4	6.4	6.3	6.5	6.4	6.4	6.3	6.3	6.4	6.3	6.4	6.3	6.4	
Fertilizers.....		25.8	34.1	38.7	29.5	27.4	26.3	24.9	24.0	24.7	24.9	22.5	21.7	26.9	26.1	
Vegetable and animal oils and fats.....		23.9	24.9	26.5	26.6	27.4	27.9	29.4	30.4	30.8	28.5	28.1	24.4	27.2	26.1	
Miscellaneous chemicals.....		68.2	68.4	67.6	67.0	66.2	65.1	66.7	66.9	68.4	68.6	67.2	66.5	66.0	63.1	
Products of petroleum and coal.....	154.8	155.5	154.9	154.4	154.2	154.9	154.1	154.5	153.7	150.5	152.9	150.7	158.2	153.4	157.6	
Petroleum refining.....		117.8	116.7	116.3	116.4	117.1	116.4	116.4	114.9	115.8	117.1	114.7	120.4	118.4	121.2	
Coke, other petroleum and coal products.....		37.7	38.2	38.1	37.8	37.8	37.7	38.1	38.8	35.0	35.8	36.0	37.8	37.0	35.8	
Rubber products.....	194.7	198.3	197.6	200.7	207.5	208.6	208.0	208.0	209.1	212.3	212.4	203.8	203.4	199.4	190.0	
Tires and inner tubes.....		76.9	77.0	78.1	78.8	77.4	77.9	78.1	79.0	79.7	79.6	78.4	79.7	74.6	74.7	
Rubber footwear.....		18.2	18.1	18.5	18.9	19.0	19.0	19.4	19.6	19.1	19.0	18.4	18.3	17.9	16.7	
Other rubber products.....		103.2	102.5	104.1	109.8	112.2	111.1	110.5	110.5	113.5	112.9	107.0	105.4	106.9	94.6	
Leather and leather products.....	319.4	323.1	315.2	316.9	328.1	328.8	329.0	331.5	331.0	331.0	335.4	339.3	334.6	331.6	317.7	
Leather, tanned, curried, and finished.....		30.2	29.7	29.8	30.1	30.5	31.3	31.5	31.7	31.9	32.6	32.8	32.4	32.8	33.7	
Industrial leather belting and packing.....		3.2	3.1	3.3	3.7	3.9	3.9	3.8	3.9	4.0	4.0	4.0	3.9	3.8	3.1	
Boot and shoe cut stock and findings.....		17.2	16.6	16.6	17.5	17.9	18.1	17.4	17.4	16.9	16.9	17.5	17.6	17.4	16.2	
Footwear (except rubber).....		218.7	212.3	213.7	220.6	221.7	223.6	224.0	220.4	219.2	223.7	228.5	227.3	223.7	213.8	
Luggage.....		13.7	13.5	13.3	13.3	12.8	12.6	12.8	13.2	14.0	13.8	13.4	13.2	13.0	12.8	
Handbags and small leather goods.....		26.2	26.0	26.5	26.2	26.1	27.7	28.3	29.5	30.1	29.3	28.3	26.3	27.3	26.1	
Gloves and miscellaneous leather goods.....		13.9	14.0	13.7	13.7	12.9	11.8	13.7	14.9	14.9	15.1	14.8	13.9	13.6	12.3	

See footnotes at end of table.

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>—Continued

(In thousands)

Industry	1960							1959							Annual average	
	July <sup>2</sup>	June <sup>2</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958	
<b>Transportation and public utilities:</b>																
Other public utilities.....	537	529	530	524	530	530	532	533	534	541	547	544	534	537		
Gas and electric utilities.....	515.7	508.0	508.9	503.7	509.4	509.9	511.3	512.8	513.5	520.1	525.3	522.6	513.0	516.4		
Electric light and power utilities.....	221.2	218.2	218.9	219.1	219.3	219.8	220.3	220.8	221.1	224.3	226.9	226.2	221.8	223.2		
Gas utilities.....	138.8	136.9	137.6	137.6	137.8	137.6	137.9	138.2	138.2	139.7	140.9	140.7	138.0	137.5		
Electric light and gas utilities combined.....	155.7	152.9	152.4	147.0	152.3	152.5	153.1	153.8	154.2	156.1	157.8	155.7	153.2	155.7		
Local utilities, not elsewhere classified.....	21.1	20.9	20.9	20.6	20.3	20.2	20.4	20.5	20.7	21.0	21.4	21.3	20.6	20.4		
<b>Wholesale and retail trade:</b>																
Wholesale trade.....	2,688	2,670	2,679	2,671	2,674	2,674	2,721	2,709	2,694	2,671	2,655	2,646	2,651	2,622		
Wholesalers, full-service and limited-function.....	1,621.2	1,606.3	1,612.6	1,604.9	1,607.9	1,608.5	1,643.0	1,633.1	1,623.4	1,612.9	1,601.8	1,589.4	1,588.8	1,536.7		
Automotive.....	121.6	121.0	120.5	120.0	120.1	119.9	121.3	120.9	120.8	120.6	121.1	119.6	117.5	110.0		
Groceries, food specialties, beer, wines, and liquors.....	280.4	277.9	279.8	282.2	281.0	282.9	287.2	287.2	286.1	277.9	272.6	273.1	276.9	272.2		
Electrical goods, machinery, hardware, and plumbing equipment.....	394.7	392.4	392.6	392.2	392.0	391.2	394.8	394.6	394.5	392.2	393.4	391.4	388.1	382.1		
Other full-service and limited-function wholesalers.....	824.5	815.0	819.7	810.5	814.8	814.5	830.7	830.4	828.0	822.2	814.7	805.3	806.3	772.4		
Wholesale distributors, other.....	1,066.8	1,063.7	1,066.7	1,066.0	1,066.5	1,065.8	1,078.1	1,075.9	1,070.8	1,068.1	1,052.7	1,056.1	1,061.8	1,064.9		
Retail trade.....	1,355.3	1,362.4	1,407.7	1,301.6	1,299.7	1,362.4	1,919.3	1,825.8	1,419.1	1,363.3	1,307.9	1,301.8	1,383.6	1,534.7		
General merchandise stores.....	857.3	859.4	872.0	820.7	826.4	871.0	1,219.3	981.1	904.4	839.3	833.9	830.4	828.6	855.9		
Department stores and general mail-order houses.....	498.0	503.0	535.7	480.9	473.3	491.4	700.0	544.7	514.7	504.0	474.0	471.1	501.0	478.8		
Other general merchandise stores.....	1,516.1	1,508.6	1,512.6	1,499.9	1,500.3	1,496.4	1,532.9	1,516.0	1,498.1	1,484.8	1,477.5	1,468.4	1,485.3	1,483.2		
Food and liquor stores.....	1,129.8	1,126.2	1,127.8	1,128.1	1,123.9	1,125.1	1,145.3	1,136.8	1,118.4	1,099.4	1,089.8	1,080.8	1,102.0	1,078.7		
Grocery, meat, and vegetable markets.....	191.9	188.7	185.8	173.0	181.2	181.4	184.7	184.0	184.9	194.9	198.5	199.5	190.1	196.5		
Dairy-product stores and dealers.....	194.4	193.7	199.0	190.2	193.2	189.9	203.5	195.2	194.8	190.5	189.2	188.1	193.2	206.0		
Other food and liquor stores.....	728.3	722.5	720.0	705.9	705.1	704.3	720.5	708.8	709.0	706.8	706.0	708.6	699.8	677.2		
Automotive and accessories dealers.....	571.7	570.2	623.8	530.1	530.2	536.4	692.0	583.1	569.3	552.1	517.3	521.0	554.7	542.0		
Apparel and accessories stores.....																
Other retail trade (except eating and drinking places).....	2,127.2	2,095.4	2,096.5	2,064.5	2,068.7	2,083.8	2,196.9	2,131.1	2,113.9	2,129.0	2,124.8	2,110.9	2,090.3	2,086.7		
Furniture and appliance stores.....	357.1	358.7	358.4	356.7	358.6	359.5	379.0	367.8	361.4	358.4	353.6	352.1	356.5	354.3		
Drug stores.....	377.7	371.6	375.4	363.1	361.8	368.4	393.3	349.1	355.0	368.7	364.8	363.9	357.7	337.0		

<sup>1</sup> For comparability of data with those published in issues prior to August 1958 and coverage of the series, see footnote 1, table A-3.

Production and related workers include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, ware-

housing, shipping, maintenance, repair, janitorial, watchman service, product development, auxiliary production for plant's own use (e.g., power-plant), and recordkeeping and other services closely associated with the aforementioned production operations.

<sup>2</sup> Preliminary.



TABLE A-4. Unemployment insurance and employment service programs, selected operations<sup>1</sup>

[All items except average benefit amounts are in thousands]

Item	1950						1959						
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June
<b>Employment service:<sup>1</sup></b>													
New applications for work.....	1,008	811	762	836	828	878	707	823	762	744	686	756	913
Nonfarm placements.....	537	534	511	450	412	418	432	465	566	633	570	584	581
<b>State unemployment insurance programs:</b>													
Initial claims <sup>2,4</sup> .....	1,197	1,162	1,232	1,387	1,265	1,621	1,645	1,601	1,197	936	1,011	1,228	973
Insured unemployment <sup>5</sup> (average weekly volume).....	1,588	1,682	1,939	2,209	2,157	2,180	1,841	1,677	1,309	1,203	1,291	1,333	1,298
Rate of insured unemployment <sup>6</sup> .....	4.0	4.3	4.9	5.7	5.5	5.6	4.8	4.4	3.4	3.1	3.4	3.5	3.4
Weeks of unemployment compensated <sup>7</sup> .....	6,365	6,570	7,527	9,114	7,893	7,621	7,108	5,398	4,620	4,826	4,627	5,061	5,202
Average weekly benefit amount for total unemployment <sup>8</sup> .....	\$32.33	\$32.24	\$32.50	\$32.39	\$32.26	\$31.90	\$31.91	\$32.21	\$30.81	\$30.49	\$29.76	\$29.10	\$29.23
Total benefits paid.....	\$198,938	\$204,883	\$237,391	\$287,142	\$247,838	\$235,202	\$219,466	\$168,344	\$126,856	\$141,800	\$133,444	\$142,803	\$142,919
<b>Unemployment compensation for ex-servicemen:<sup>9</sup></b>													
Initial claims <sup>3</sup> .....	27	22	23	29	27	31	31	28	37	24	28	27	23
Insured unemployment <sup>5</sup> (average weekly volume).....	45	45	54	61	61	61	53	48	41	40	44	43	43
Weeks of unemployment compensated.....	195	197	230	272	247	241	229	178	160	174	176	181	188
Total benefits paid.....	\$5,957	\$6,004	\$7,032	\$8,345	\$7,570	\$7,427	\$6,966	\$5,297	\$4,825	\$5,207	\$5,238	\$5,349	\$5,564
<b>Unemployment compensation for Federal civilian employees:<sup>10</sup></b>													
Initial claims <sup>3</sup> .....	12	12	11	12	13	17	14	14	13	12	11	15	12
Insured unemployment <sup>5</sup> (average weekly volume).....	29	30	33	38	39	38	33	31	28	27	28	28	28
Weeks of unemployment compensated.....	128	126	144	173	159	148	144	117	112	117	114	115	121
Total benefits paid.....	\$4,383	\$4,201	\$4,799	\$5,730	\$5,265	\$4,820	\$4,713	\$3,815	\$3,568	\$3,685	\$3,602	\$3,578	\$3,801
<b>Railroad unemployment insurance:</b>													
Applications <sup>11</sup> .....	6	5	6	59	6	12	15	21	22	32	35	37	8
Insured unemployment (average weekly volume).....	39	45	54	63	66	78	105	93	97	94	79	63	35
Number of payments <sup>12</sup> .....	104	104	133	164	159	184	190	201	223	194	174	95	88
Average amount of benefit payment <sup>13</sup> .....	\$71.08	\$72.19	\$74.56	\$77.35	\$70.10	\$80.57	\$80.82	\$80.61	\$83.50	\$84.31	\$83.16	\$75.22	\$72.13
Total benefits paid <sup>14</sup> .....	\$7,502	\$7,909	\$10,414	\$13,374	\$13,754	\$15,582	\$19,206	\$21,693	\$25,810	\$26,078	\$27,314	\$18,918	\$21,202
<b>All programs:<sup>15</sup></b>													
Insured unemployment <sup>5</sup> .....	1,700	1,801	2,078	2,370	2,325	2,339	2,068	1,853	1,479	1,370	1,451	1,477	1,414

<sup>1</sup> Data relate to the United States (including Alaska and Hawaii), except where otherwise indicated.<sup>2</sup> Includes Guam, Puerto Rico, and the Virgin Islands.<sup>3</sup> Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transitional claims.<sup>4</sup> Includes Puerto Rico and the Virgin Islands.<sup>5</sup> Number of workers reporting the completion of at least 1 week of unemployment.<sup>6</sup> The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.<sup>7</sup> Includes data for the Federal civilian employee program through June 1959.<sup>8</sup> Includes data for the Federal civilian employee program for the period October 1958-June 1959.<sup>9</sup> Excludes data on claims and payments made jointly with other programs.<sup>10</sup> Excludes data on claims and payments made jointly with State programs.<sup>11</sup> An application for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year.<sup>12</sup> Payments are for unemployment in 14-day registration periods.<sup>13</sup> The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.<sup>14</sup> Adjusted for recovery of overpayments and settlement of underpayments.<sup>15</sup> Represents an unduplicated count of insured unemployment under the State, Ex-servicemen and UCFE programs, the Railroad Unemployment Insurance Act, and the Veterans' Readjustment Assistance Act of 1952 (not presented separately in table), which terminated January 31, 1960.

Source: U.S. Department of Labor, Bureau of Employment Security for all items except railroad unemployment insurance, which is prepared by the U.S. Railroad Retirement Board.

## B.—Labor Turnover

TABLE B-1. Labor turnover rates, by major industry group <sup>1</sup>

[Per 100 employees]

Major industry group	1960						1959						Annual average		
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
	Accessions: Total <sup>2</sup>														
Manufacturing.....	3.6	3.2	2.8	2.7	2.9	3.6	3.8	3.0	3.1	3.9	2.9	3.3	4.4	3.6	3.0
Durable goods.....	3.4	3.2	2.8	2.7	2.9	3.8	4.7	3.2	3.1	4.1	4.1	3.3	4.5	3.8	3.2
Ordinance and accessories.....	3.5	2.1	1.9	2.1	2.2	2.4	2.2	2.8	2.7	2.9	3.0	2.6	4.0	2.8	2.8
Lumber and wood products.....	6.3	6.9	5.6	3.7	3.5	3.6	2.4	3.1	3.6	4.5	4.6	5.0	7.4	4.7	4.1
Furniture and fixtures.....	3.3	4.0	3.5	3.3	3.3	3.9	2.9	3.0	3.8	4.8	5.3	4.5	4.8	4.0	3.4
Stone, clay, and glass products.....	3.3	2.8	2.8	2.3	2.5	2.6	1.9	2.8	2.5	2.7	3.3	2.9	4.5	3.1	2.9
Primary metal industries.....	2.2	1.8	1.6	1.7	2.2	2.7	2.7	2.2	2.2	2.8	2.4	1.8	2.8	2.9	2.8
Fabricated metal products.....	3.9	3.9	3.2	3.0	3.6	5.0	6.3	3.8	3.2	4.6	3.7	3.6	4.8	4.4	3.6
Machinery (except electrical).....	2.9	2.3	1.9	2.3	2.6	3.3	3.1	2.7	2.4	3.1	3.0	2.8	4.2	3.2	2.8
Electrical machinery.....	3.3	2.8	2.1	2.5	2.7	3.1	2.9	3.1	3.3	4.6	4.2	3.4	4.5	3.6	2.8
Transportation equipment.....	3.5	3.3	3.1	3.1	3.3	5.2	11.8	3.3	3.6	4.8	4.4	3.5	4.5	4.5	4.0
Instruments and related products.....	2.8	2.0	1.8	1.7	2.2	1.9	1.4	2.2	2.5	3.1	2.8	2.1	3.7	2.5	1.9
Miscellaneous manufacturing.....	4.0	4.9	4.8	5.1	4.2	5.8	2.6	2.8	4.7	6.3	6.8	5.4	5.2	4.8	4.0
Nondurable goods <sup>4</sup> .....	3.9	3.3	2.8	2.6	2.8	3.1	2.1	2.6	2.9	3.5	3.6	3.4	4.3	3.1	2.7
Food and kindred products.....	4.0	4.6	4.4	3.1	3.3	3.9	2.7	3.8	3.9	4.5	4.3	4.2	5.5	4.1	3.5
Tobacco manufactures.....	1.2	2.5	1.3	1.4	1.4	1.4	.6	1.1	1.9	2.5	2.3	3.7	2.1	1.8	1.6
Textile-mill products.....	3.5	3.3	2.8	3.1	3.0	3.2	2.1	2.5	3.0	3.5	3.9	3.6	4.0	3.2	3.0
Apparel and other finished textile products.....	3.8	4.0	3.4	3.4	4.0	4.4	2.2	3.1	4.1	5.0	5.6	5.0	4.6	4.2	3.4
Paper and allied products.....	3.8	2.5	2.2	2.1	2.2	2.3	1.7	1.8	2.2	3.0	2.9	2.8	4.3	2.6	2.1
Chemicals and allied products.....	3.0	1.7	1.4	1.6	1.7	1.6	1.2	1.3	1.6	1.8	1.9	1.9	3.3	1.8	1.3
Products of petroleum and coal.....	1.8	1.2	.7	.8	.6	.6	4.5	.7	1.0	.8	.8	.8	1.9	1.0	.7
Rubber products.....	3.3	2.7	1.7	1.5	2.3	2.7	2.0	1.8	2.4	3.2	3.3	2.4	3.7	2.7	2.6
Leather and leather products.....	5.7	5.1	3.0	3.1	3.3	4.2	3.6	4.7	3.5	4.0	4.0	4.5	5.6	4.1	3.3
Nonmanufacturing.....	3.2	3.6	6.0	3.9	2.4	3.6	2.9	2.1	2.7	1.8	2.2	2.3	3.4	2.7	2.5
Metal mining.....	2.5	1.0	1.1	1.0	.7	1.8	.9	1.8	2.4	2.1	1.5	1.5	1.0	1.6	1.6
Anthracite mining.....	1.1	1.0	1.2	.9	1.3	1.7	4.1	8.8	1.5	2.1	2.0	1.4	.9	2.3	1.2
Bituminous coal mining.....	2.6	1.0	1.2	.9	1.3	1.7	4.1	8.8	1.5	2.1	2.0	1.4	.9	2.3	1.2
Accessions: New hires															
Manufacturing.....	2.2	1.7	1.4	1.5	1.7	1.9	1.3	1.5	2.0	2.6	2.5	2.2	3.0	2.0	1.3
Durable goods.....	1.9	1.6	1.4	1.4	1.7	1.9	1.3	1.4	2.0	2.6	2.5	2.2	3.0	2.0	1.3
Ordinance and accessories.....	1.9	1.4	1.2	1.5	1.6	1.5	1.5	2.1	2.1	2.2	2.3	2.1	3.0	1.9	1.7
Lumber and wood products.....	5.2	5.5	3.7	2.6	2.4	2.3	1.7	2.3	2.9	4.1	4.1	4.4	6.2	3.7	2.7
Furniture and fixtures.....	2.3	2.6	2.1	2.3	2.2	2.4	1.5	2.0	3.0	4.0	4.3	3.5	3.4	2.8	1.7
Stone, clay, and glass products.....	1.8	1.5	1.2	1.2	1.3	1.2	.8	1.0	2.0	1.8	2.2	2.0	3.3	1.8	.9
Primary metal industries.....	.7	.6	.6	.8	1.2	1.4	1.0	.9	1.2	1.6	1.5	1.0	1.9	1.5	.5
Fabricated metal products.....	2.2	1.7	1.4	1.5	2.0	2.4	1.8	1.4	1.8	2.7	2.9	2.2	3.0	2.1	1.4
Machinery (except electrical).....	1.8	1.2	1.1	1.4	1.6	1.8	1.1	1.3	1.6	2.0	2.0	1.8	2.8	1.8	.9
Electrical machinery.....	1.8	1.3	1.0	1.4	1.7	1.8	1.4	1.5	2.5	3.3	3.0	2.3	3.0	2.2	1.4
Transportation equipment.....	1.4	1.2	1.1	.9	1.6	2.0	1.5	.9	1.6	1.8	1.4	1.6	2.2	1.5	1.3
Instruments and related products.....	2.2	1.3	1.4	1.2	1.6	1.3	1.1	1.5	2.0	2.6	2.1	1.8	3.2	1.9	.9
Miscellaneous manufacturing.....	2.5	2.6	2.3	2.5	2.5	2.8	1.4	1.9	3.5	4.9	4.2	3.8	3.6	3.0	1.9
Nondurable goods <sup>4</sup> .....	2.6	1.9	1.6	1.5	1.7	1.7	1.2	1.5	2.0	2.5	2.6	2.4	3.0	2.0	1.3
Food and kindred products.....	3.0	2.2	1.7	1.4	1.5	1.6	1.1	1.9	2.3	2.6	2.5	2.4	3.1	2.0	1.5
Tobacco manufactures.....	.8	1.3	.6	.5	.7	.7	.3	.7	1.2	1.8	1.3	1.8	1.3	1.1	.8
Textile-mill products.....	2.3	2.0	1.7	1.7	1.8	1.7	1.2	1.5	2.0	2.6	2.5	2.7	2.7	2.1	1.5
Apparel and other finished textile products.....	2.8	2.8	2.6	2.6	2.7	2.9	1.5	2.3	3.0	3.9	4.3	3.7	3.2	3.0	1.8
Paper and allied products.....	2.8	1.8	1.5	1.3	1.5	1.5	1.0	1.3	1.8	2.4	2.3	2.1	3.4	1.9	1.3
Chemicals and allied products.....	2.5	1.2	1.0	1.1	1.2	1.0	.7	.9	1.3	1.4	1.5	1.5	2.6	1.2	.8
Products of petroleum and coal.....	1.2	.8	.5	.4	.3	.2	.2	.3	.6	.7	.6	.7	1.4	.6	.3
Rubber products.....	1.1	.7	.5	.6	1.3	1.6	.9	1.0	1.7	2.5	2.3	1.8	2.5	1.7	.8
Leather and leather products.....	3.9	2.6	1.6	1.6	1.7	2.5	1.9	2.0	2.1	2.6	2.6	3.4	4.1	2.6	1.7
Nonmanufacturing.....	2.2	2.3	2.4	1.7	1.1	1.6	1.1	1.1	1.5	1.3	1.7	1.3	1.9	1.4	.7
Metal mining.....	.6	.1	.1	.2	.2	.3	.5	1.2	1.0	.5	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	.3	.4
Anthracite mining.....	.6	.5	.4	.3	.5	.4	.3	.5	.6	.5	.6	.4	.2	.4	.3
Bituminous coal mining.....	.6	.5	.4	.3	.5	.4	.3	.5	.6	.5	.6	.4	.2	.4	.3

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group<sup>1</sup>—Continued

[Per 100 employees]

Major industry group	1960						1959						Annual average		
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
Separations: Total <sup>3</sup>															
Manufacturing.....	3.2	3.3	3.6	3.7	3.0	2.9	3.1	4.1	4.7	4.3	3.7	3.3	2.8	2.4	2.6
Durable goods.....	3.6	3.5	3.9	4.1	3.1	2.8	3.1	4.5	5.3	4.4	3.9	3.5	3.0	2.5	2.9
Ordinance and accessories.....	3.7	2.2	3.1	2.2	1.7	2.1	1.4	1.7	2.3	3.3	2.2	1.8	2.3	2.3	2.9
Lumber and wood products.....	4.7	3.9	4.9	5.3	3.4	3.9	4.6	5.1	5.0	5.9	6.0	4.9	3.8	4.6	4.3
Furniture and fixtures.....	3.1	3.5	4.2	3.6	3.8	3.9	3.1	3.5	4.8	5.5	4.3	4.0	2.3	3.7	3.7
Stone, clay, and glass products.....	3.6	2.8	3.1	3.6	2.6	2.8	2.9	2.7	3.4	4.5	3.4	3.1	2.4	2.8	2.5
Primary metal industries.....	4.7	4.4	3.6	3.5	2.2	1.8	2.0	2.5	3.5	3.5	2.5	2.2	2.1	2.3	2.3
Fabricated metal products.....	3.5	3.4	4.4	5.1	3.9	3.1	3.0	3.6	9.1	4.8	4.4	4.2	2.7	4.3	4.3
Machinery (except electrical).....	2.9	3.1	3.2	2.9	2.4	2.2	2.2	3.0	3.7	3.7	2.7	2.7	2.4	2.7	3.3
Electrical machinery.....	3.0	3.1	3.7	4.0	3.1	3.0	2.7	2.8	3.4	3.7	2.8	2.7	2.5	2.8	3.1
Transportation equipment.....	4.0	3.8	4.8	5.4	3.9	3.0	3.8	3.5	8.9	3.0	6.0	5.0	3.8	5.2	5.1
Instruments and related products.....	2.4	2.3	2.1	1.9	2.1	1.8	2.0	2.1	2.9	3.1	2.3	1.7	2.4	2.1	2.4
Miscellaneous manufacturing.....	3.9	3.9	4.9	4.3	3.9	4.3	7.9	6.6	5.1	5.6	4.3	3.8	3.3	4.7	4.7
Nondurable goods <sup>4</sup> .....	2.5	2.9	3.1	3.0	2.8	3.0	2.9	3.2	3.5	4.1	3.4	2.9	2.6	3.0	3.0
Food and kindred products.....	2.7	3.7	3.6	4.1	3.5	4.1	4.1	4.4	4.9	5.3	4.0	3.5	3.3	4.0	3.8
Tobacco manufactures.....	1.3	1.5	1.7	2.0	1.9	2.7	1.9	1.3	1.7	2.1	1.9	2.7	1.6	1.9	2.1
Textile-mill products.....	2.8	2.9	3.5	2.9	3.0	3.1	3.3	3.3	4.0	4.1	3.7	3.2	2.8	3.3	3.4
Apparel and other finished textile products.....	2.8	4.0	4.0	3.6	3.3	4.0	3.3	3.5	4.0	4.8	4.5	4.0	3.3	3.8	3.8
Paper and allied products.....	2.5	2.3	2.2	2.4	2.3	2.6	2.4	2.6	2.8	4.1	3.2	2.4	2.4	2.6	2.4
Chemicals and allied products.....	1.4	1.3	1.5	1.4	1.2	1.6	1.5	1.6	1.7	2.7	1.8	1.3	1.3	1.6	1.3
Products of petroleum and coal.....	1.3	.9	1.1	.9	.7	1.0	1.0	1.3	1.1	1.7	1.1	1.3	1.0	1.1	1.3
Rubber products.....	3.0	2.7	3.8	4.1	2.8	2.4	2.7	3.6	2.7	3.0	2.5	2.3	2.2	2.5	2.7
Leather and leather products.....	3.6	4.2	4.6	4.8	4.3	3.7	3.3	3.8	5.2	5.2	4.7	3.9	3.6	3.9	3.7
Nonmanufacturing:															
Metal mining.....	2.0	2.7	2.6	3.1	1.7	2.2	2.2	2.2	1.8	4.3	2.7	2.6	2.7	2.6	3.9
Anthracite mining.....	4.7	3.1	3.2	1.1	1.3	2.2	.7	2.5	1.3	1.7	1.7	5.7	3.2	2.9	4.3
Bituminous coal mining.....	4.4	4.0	3.8	1.9	1.3	1.5	1.7	2.1	1.4	1.8	19.6	4.0	2.2	3.6	2.8
Separations: Quits															
Manufacturing.....	1.1	1.1	1.1	1.0	1.0	1.0	0.9	1.0	1.4	2.2	1.8	1.3	1.3	1.3	0.9
Durable goods.....	1.0	1.0	1.0	.9	.9	.9	.8	.9	1.3	2.1	1.6	1.2	1.2	1.2	.8
Ordinance and accessories.....	.9	.8	1.0	.8	.8	.9	.7	.7	1.0	1.9	1.4	1.1	1.0	1.1	.8
Lumber and wood products.....	2.1	2.2	2.3	1.8	1.5	1.4	1.4	1.8	2.4	4.3	2.8	2.7	2.8	2.3	1.7
Furniture and fixtures.....	1.4	1.7	1.9	1.4	1.4	1.5	1.0	1.3	2.0	2.9	2.6	1.9	1.6	1.7	1.1
Stone, clay, and glass products.....	.7	.8	.7	.7	.7	.7	.5	.7	1.0	1.8	1.6	1.0	1.0	.9	.7
Primary metal industries.....	1.0	1.0	1.0	.9	.9	1.0	.7	.8	1.1	1.9	1.6	1.1	1.2	1.1	.8
Fabricated metal products.....	.8	.8	.9	.8	.7	.7	.6	.7	.9	1.6	1.2	.9	1.0	.9	.6
Machinery (except electrical).....	1.0	1.0	1.0	1.1	1.0	1.1	1.0	1.1	1.4	2.3	1.7	1.2	1.2	1.3	.9
Electrical machinery.....	.9	.8	.8	.7	.8	.8	.7	.7	1.0	1.5	1.1	1.0	1.1	1.0	.8
Transportation equipment.....	1.0	.8	.9	.8	.9	.8	.7	.8	1.4	2.0	1.4	.9	1.1	1.0	.7
Instruments and related products.....	1.3	1.5	1.6	1.5	1.4	1.5	1.1	1.5	2.4	3.5	2.6	1.9	1.6	1.8	1.3
Miscellaneous manufacturing.....	1.3	1.3	1.3	1.2	1.1	1.2	1.0	1.2	1.5	2.5	2.1	1.6	1.4	1.4	1.0
Nondurable goods <sup>4</sup> .....	1.0	1.1	1.0	.9	1.0	1.0	.8	1.0	1.4	2.3	1.8	1.2	1.2	1.2	.9
Food and kindred products.....	.7	.9	.9	.8	.9	1.2	.7	.8	1.2	1.5	1.4	1.6	1.1	1.1	.9
Textile-mill products.....	1.5	1.6	1.7	1.4	1.3	1.4	1.1	1.4	1.8	2.6	2.4	1.9	1.6	1.6	1.2
Apparel and other finished textile products.....	2.1	2.6	2.4	2.3	2.3	2.3	1.8	2.2	2.8	3.6	3.5	2.9	2.3	2.5	1.7
Paper and allied products.....	1.1	1.0	.9	.8	.8	.9	.7	.9	1.2	2.7	1.8	1.1	1.2	1.2	.8
Chemicals and allied products.....	.7	.6	.6	.5	.5	.6	.4	.5	.7	1.7	1.0	.7	.7	.7	.5
Products of petroleum and coal.....	.3	.3	.3	.3	.2	.3	.2	.3	.4	1.0	.5	.3	.3	.4	.3
Rubber products.....	.8	.8	.7	.7	.8	.8	.7	.7	1.0	1.6	1.3	.9	1.1	.9	.6
Leather and leather products.....	2.4	2.0	1.9	1.6	1.7	1.8	1.4	1.7	2.0	3.0	3.1	2.6	2.5	2.1	1.5
Nonmanufacturing:															
Metal mining.....	.8	1.6	1.7	2.1	.9	.9	1.0	.9	1.0	2.2	1.4	1.7	1.2	1.4	1.2
Anthracite mining.....	.1	.7	.3	.3	.2	( <sup>5</sup> )	.2	.2	.4	.5	.6	.1	.5	.3	.5
Bituminous coal mining.....	.3	.3	.3	.2	.2	.3	.3	.4	.5	.6	.4	.3	.2	.3	.3

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group <sup>1</sup>—Continued

[Per 100 employees]

Major industry group	1960						1959								Annual average	
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958	
	Separations: Layoffs															
Manufacturing.....	1.6	1.6	2.0	2.2	1.5	1.3	1.7	2.6	2.8	1.5	1.4	1.4	1.0	1.6	2.3	
Durable goods.....	2.0	1.9	2.3	2.6	1.6	1.3	1.8	3.1	3.5	1.6	1.6	1.7	1.1	1.8	2.6	
Ordnance and accessories.....	2.0	1.1	1.7	1.0	.5	.7	.4	.7	.8	.6	.3	.3	.7	.7	1.5	
Lumber and wood products.....	1.8	1.1	1.9	2.8	1.5	1.9	2.7	2.7	1.9	1.0	1.7	1.5	.7	1.7	2.1	
Furniture and fixtures.....	1.1	1.1	1.7	1.7	1.9	1.9	1.6	1.7	2.1	1.8	1.0	1.4	1.1	1.4	2.2	
Stone, clay, and glass products.....	2.5	1.5	1.8	2.4	1.4	1.5	2.1	1.6	1.9	2.1	1.2	1.6	.7	1.4	2.5	
Primary metal industries.....	3.8	3.4	2.5	2.4	1.2	.8	.9	1.3	2.1	1.5	.9	1.1	.7	1.0	2.6	
Fabricated metal products.....	1.9	1.8	2.9	3.7	2.4	1.6	1.8	4.3	7.3	2.2	2.2	2.5	1.8	2.7	3.1	
Machinery (except electrical).....	1.6	1.8	1.8	1.6	1.1	1.0	1.1	1.9	2.2	1.5	.9	1.3	.9	1.2	2.4	
Electrical machinery.....	1.2	1.4	1.9	2.3	1.3	1.1	1.1	1.0	1.3	.6	.5	.9	.6	.9	1.8	
Transportation equipment.....	2.5	2.4	3.4	4.0	2.4	1.7	2.5	8.2	7.3	2.6	4.1	3.3	2.1	3.6	3.8	
Instruments and related products.....	.9	1.0	.8	.7	.8	.7	.9	.9	1.0	.6	.5	.8	.9	.6	1.3	
Miscellaneous manufacturing.....	1.8	1.7	2.7	2.2	1.9	2.2	6.4	4.7	2.0	1.3	.9	1.2	1.1	2.3	3.1	
Nondurable goods <sup>4</sup> .....	.8	1.1	1.4	1.4	1.2	1.3	1.6	1.6	1.8	1.1	.8	.9	.8	1.2	1.7	
Food and kindred products.....	1.3	2.1	2.1	2.7	2.3	2.6	3.0	3.0	3.0	2.4	1.7	1.8	1.7	2.4	2.5	
Tobacco manufactures.....	.2	.4	.5	.8	.7	1.2	.9	.3	.1	.2	.2	.7	.2	.5	.9	
Textile-mill products.....	.8	.9	1.4	1.0	1.3	1.2	1.7	1.5	1.6	1.0	.8	.8	.7	1.2	1.8	
Apparel and other finished textile products.....	.5	1.0	1.1	.9	.7	1.2	1.1	1.1	.6	.8	.6	.6	.6	.9	1.8	
Paper and allied products.....	.8	.8	.8	1.0	1.0	1.2	1.2	1.2	1.1	.6	.8	.7	.7	.9	1.3	
Chemicals and allied products.....	.4	.4	.6	.5	.4	.6	.7	.8	.6	.5	.3	.3	.2	.5	1.0	
Products of petroleum and coal.....	.5	.3	.5	.3	.2	.5	.4	.7	.5	.3	.2	.6	.2	.4	.6	
Rubber products.....	1.7	1.5	2.7	2.9	1.6	1.1	1.7	2.5	1.2	.9	.7	.9	.7	1.1	1.8	
Leather and leather products.....	.8	1.6	2.1	2.6	1.7	1.2	1.3	1.4	2.6	1.5	.9	.7	.8	1.2	1.8	
Nonmanufacturing.....	.4	.2	.2	.5	.3	.7	.4	.9	.3	1.6	.8	.2	.7	.6	2.2	
Metal mining.....	2.8	1.6	1.8	.2	.6	.8	(9)	1.8	.3	.3	(9)	1.8	1.9	1.7	3.7	
Anthracite mining.....	3.8	3.5	3.1	1.4	.8	.9	1.1	1.5	.7	.8	18.9	3.3	1.8	3.1	2.0	

<sup>1</sup> Month-to-month changes in total employment in manufacturing and nonmanufacturing industries as indicated by labor turnover rates are not comparable with the changes shown by the Bureau's employment series for the following reasons:

(1) The labor turnover series measures changes during the calendar month, while the employment series measures changes from midmonth to midmonth;

(2) Industry coverage is not identical, as the printing and publishing industry and some seasonal industries are excluded from turnover;

(3) Turnover rates tend to be understated because small firms are not as prominent in the turnover sample as in the employment sample; and

(4) Reports from plants affected by work stoppages are excluded from the

turnover series, but the employment series reflects the influence of such stoppages.

<sup>2</sup> Preliminary.

<sup>3</sup> Beginning with January 1959, transfers between establishments of the same firm are included in total accessions and total separations; therefore, rates for these items are not strictly comparable with prior data. Transfers comprise part of other accessions and other separations, the rates for which are not shown separately.

<sup>4</sup> Excludes the printing, publishing, and allied industries group, and the following industries: Canning and preserving; women's, misses', and children's outerwear; and fertilizer.

<sup>5</sup> Less than 0.04.



## C.—Earnings and Hours

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry

Industry	1950					1959										Annual average	
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958		
Average weekly earnings																	
Mining.....	\$110.29	\$110.70	\$111.35	\$110.98	\$108.13	\$111.11	\$114.51	\$109.89	\$108.92	\$107.45	\$108.77	\$103.49	\$111.49	\$107.73	\$100.10		
Metal.....	111.99	114.01	113.58	111.30	107.71	113.05	111.41	108.84	99.38	99.29	97.71	93.14	107.79	103.31	96.22		
Iron.....	118.90	120.22	120.80	115.66	115.95	122.40	118.98	119.00	86.34	90.19	95.84	84.10	116.18	107.34	100.27		
Copper.....	113.80	115.54	114.66	114.66	103.94	111.87	110.32	105.64	110.53	99.46	96.75	100.85	106.60	106.17	94.62		
Lead and zinc.....	93.94	94.58	93.71	92.52	92.62	94.71	94.58	93.20	92.39	94.85	92.89	89.24	91.66	90.63	85.93		
Anthracite.....	93.56	82.29	80.88	99.91	76.16	88.09	94.73	93.84	82.80	88.36	76.73	79.20	82.75	84.98	76.01		
Bituminous coal.....	120.41	119.03	122.30	127.26	121.97	127.32	133.38	118.14	123.55	115.81	120.74	104.98	126.49	118.30	102.38		
Crude-petroleum and natural-gas production.....																	
Petroleum and natural-gas production (except contract services).....	113.81	116.03	115.18	113.52	112.12	116.72	113.91	117.53	113.12	116.72	115.75	117.31	112.56	114.93	106.75		
Nonmetallic mining and quarrying.....	100.80	98.78	98.55	92.89	91.46	92.38	96.13	95.90	97.90	99.01	100.33	98.32	96.08	95.48	89.53		
Contract construction.....	121.13	119.56	119.19	115.50	113.75	113.72	117.81	113.88	117.66	115.66	119.88	116.56	116.66	114.82	110.47		
Nonbuilding construction.....	120.47	118.03	117.95	116.91	111.16	108.00	113.47	110.87	117.74	112.58	121.29	118.30	117.46	113.24	106.47		
Highway and street construction.....	117.43	111.90	112.38	108.69	101.01	96.73	103.88	104.89	113.03	106.62	119.71	115.44	113.88	108.09	104.14		
Other nonbuilding construction.....	123.91	123.86	123.51	124.26	117.56	115.50	120.87	116.74	123.01	116.35	123.07	121.29	120.77	118.40	114.26		
Building construction.....	120.88	119.91	119.19	115.60	114.22	114.87	119.13	114.14	117.72	116.71	119.19	116.16	116.66	115.28	110.67		
General contractors.....	110.77	110.26	109.50	104.83	104.31	104.88	108.78	103.63	109.85	107.87	110.70	107.15	108.19	106.39	102.53		
Special-trade contractors.....	126.67	124.93	124.57	120.74	119.71	119.72	124.53	120.04	122.38	121.70	123.98	120.88	121.81	120.27	115.28		
Plumbing and heating.....	134.85	132.68	131.98	130.27	128.43	129.83	133.32	129.08	130.79	126.29	131.45	129.96	128.78	128.56	123.23		
Painting and decorating.....	118.27	116.60	115.58	113.91	110.22	111.89	115.87	113.89	115.17	116.47	117.00	114.65	114.32	113.40	107.95		
Electrical work.....	148.99	148.23	147.07	146.69	144.77	146.30	148.19	142.51	144.28	138.75	144.71	145.08	143.91	142.06	135.97		
Other special-trade contractors.....	121.40	119.70	118.99	112.83	112.53	111.54	118.27	113.23	116.49	117.51	118.70	114.37	116.28	113.80	109.31		
Average weekly hours																	
Mining.....	41.0	41.0	41.1	40.8	39.9	40.7	42.1	40.7	41.1	40.7	41.2	39.2	41.6	40.5	39.1		
Metal.....	42.1	42.7	42.7	42.0	40.8	42.5	42.2	41.7	40.4	40.2	39.4	36.1	41.3	40.2	38.8		
Iron.....	41.0	41.6	41.8	40.3	40.4	42.5	41.6	41.9	39.4	31.1	32.6	28.9	40.2	37.4	36.2		
Copper.....	43.6	44.1	44.1	44.1	40.6	43.7	45.4	44.2	45.3	41.1	38.7	40.5	42.3	42.3	39.1		
Lead and zinc.....	41.2	41.3	41.1	40.4	40.8	41.0	41.3	40.7	40.7	41.6	41.1	38.8	40.2	40.1	39.6		
Anthracite.....	33.9	29.6	29.2	36.2	27.2	31.8	34.2	34.0	30.0	31.9	27.9	-----	20.2	20.9	28.9		
Bituminous coal.....	36.6	36.4	37.4	38.8	37.3	38.7	40.9	35.8	37.9	35.2	36.7	32.5	38.8	36.4	33.9		
Crude-petroleum and natural-gas production.....																	
Petroleum and natural-gas production (except contract services).....	40.5	41.0	40.7	40.4	39.9	41.1	40.5	41.2	40.4	41.1	40.9	41.6	40.2	40.9	40.8		
Nonmetallic mining and quarrying.....	45.0	43.9	43.8	41.1	41.2	41.8	43.3	43.2	44.3	44.6	45.4	45.1	43.2	43.8	43.3		
Contract construction.....	37.5	36.9	36.9	35.0	35.0	35.1	36.7	35.7	37.0	36.6	38.3	37.6	38.0	36.8	36.7		
Nonbuilding construction.....	41.4	40.7	41.1	39.1	38.2	37.5	39.4	38.9	40.6	39.5	43.0	42.1	42.1	40.3	40.1		
Highway and street construction.....	42.7	41.6	42.4	39.0	38.7	37.5	39.2	39.4	41.1	40.6	44.5	43.4	43.3	41.1	41.0		
Other nonbuilding construction.....	40.1	39.7	40.1	39.2	37.8	37.5	39.5	38.4	40.2	38.4	41.3	40.7	40.8	39.6	39.4		
Building construction.....	36.3	35.9	35.9	34.2	34.3	34.6	36.1	34.8	36.0	35.8	36.9	36.3	36.8	35.8	35.7		
General contractors.....	36.2	35.8	35.9	33.6	34.2	34.5	35.9	34.3	35.9	35.6	36.9	36.2	36.8	35.7	35.6		
Special-trade contractors.....	36.4	35.9	35.9	34.4	34.4	34.6	36.2	35.1	36.1	35.9	36.9	36.3	36.8	35.9	35.8		
Plumbing and heating.....	38.2	37.8	37.6	36.8	36.8	37.2	38.2	37.2	37.8	36.5	38.1	38.0	38.1	37.7	37.6		
Painting and decorating.....	35.2	34.6	34.4	33.8	32.9	33.4	34.9	34.4	34.9	35.4	36.0	35.7	35.9	35.0	34.8		
Electrical work.....	38.9	38.5	38.3	38.1	37.5	38.4	39.1	37.8	38.5	37.0	38.9	39.0	39.0	38.4	38.3		
Other special-trade contractors.....	35.6	35.0	35.1	32.8	33.0	33.0	35.2	33.9	35.3	35.5	36.3	35.3	36.0	34.8	34.7		
Average hourly earnings																	
Mining.....	\$2.69	\$2.70	\$2.71	\$2.72	\$2.71	\$2.73	\$2.72	\$2.70	\$2.65	\$2.64	\$2.64	\$2.64	\$2.68	\$2.66	\$2.55		
Metal.....	2.66	2.67	2.66	2.65	2.64	2.66	2.64	2.61	2.46	2.47	2.48	2.58	2.61	2.57	2.48		
Iron.....	2.90	2.89	2.89	2.87	2.87	2.88	2.86	2.84	2.84	2.90	2.94	2.91	2.89	2.87	2.77		
Copper.....	2.61	2.62	2.60	2.60	2.58	2.56	2.43	2.50	2.47	2.43	2.50	2.49	2.52	2.51	2.42		
Lead and zinc.....	2.28	2.29	2.28	2.29	2.27	2.31	2.29	2.29	2.27	2.28	2.26	2.30	2.28	2.29	2.17		
Anthracite.....	2.76	2.78	2.77	2.76	2.80	2.77	2.77	2.76	2.76	2.77	2.75	-----	2.74	2.75	2.63		
Bituminous coal.....	3.29	3.27	3.27	3.28	3.27	3.29	3.31	3.30	3.26	3.29	3.29	3.23	3.26	3.25	3.02		
Crude-petroleum and natural-gas production.....																	
Petroleum and natural-gas production (except contract services).....	2.81	2.83	2.83	2.81	2.81	2.84	2.81	2.86	2.80	2.84	2.83	2.82	2.80	2.81	2.69		
Nonmetallic mining and quarrying.....	2.24	2.25	2.25	2.26	2.22	2.21	2.22	2.22	2.21	2.22	2.21	2.18	2.17	2.18	2.07		
Contract construction.....	3.23	3.24	3.23	3.30	3.25	3.24	3.21	3.19	3.18	3.16	3.13	3.10	3.07	3.12	3.01		
Nonbuilding construction.....	2.91	2.90	2.87	2.99	2.91	2.88	2.88	2.85	2.90	2.85	2.82	2.81	2.79	2.81	2.73		
Highway and street construction.....	2.79	2.69	2.65	2.71	2.61	2.58	2.65	2.66	2.75	2.70	2.69	2.66	2.63	2.63	2.54		
Other nonbuilding construction.....	3.09	3.12	3.08	3.17	3.11	3.08	3.06	3.04	3.06	3.03	2.98	2.98	2.96	2.99	2.90		
Building construction.....	3.33	3.34	3.32	3.38	3.33	3.32	3.30	3.28	3.27	3.26	3.23	3.20	3.17	3.22	3.10		
General contractors.....	3.06	3.08	3.05	3.12	3.05	3.04	3.03	3.03	3.06	3.03	3.00	2.96	2.94	2.98	2.88		
Special-trade contractors.....	3.48	3.48	3.47	3.51	3.48	3.46	3.44	3.42	3.39	3.39	3.36	3.33	3.31	3.35	3.22		
Plumbing and heating.....	3.53	3.51	3.51	3.54	3.49	3.49	3.49	3.47	3.46	3.46	3.45	3.42	3.38	3.41	3.26		
Painting and decorating.....	3.36	3.37	3.36	3.37	3.35	3.35	3.32	3.31	3.30	3.29	3.25	3.22	3.19	3.24	3.12		
Electrical work.....	3.83	3.85	3.84	3.85	3.83	3.81	3.79	3.77	3.75	3.75	3.72	3.72	3.69	3.70	3.55		
Other special-trade contractors.....	3.41	3.42	3.39	3.44	3.41	3.38	3.36	3.34	3.30	3.31	3.27	3.24	3.23	3.27	3.15		

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959						Annual average		
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
Average weekly earnings															
Manufacturing.....	\$91.60	\$91.37	\$89.60	\$90.91	\$91.14	\$92.29	\$92.16	\$88.98	\$89.06	\$89.47	\$88.70	\$89.65	\$91.17	\$89.24	\$83.50
Durable goods.....	98.98	98.58	97.36	98.74	98.98	100.80	99.87	95.44	96.52	96.70	95.88	96.80	99.36	97.10	90.06
Nondurable goods.....	82.16	81.35	79.52	79.93	79.95	80.77	81.19	80.39	79.79	80.79	80.20	80.06	79.60	79.00	75.27
Durable goods															
Ordinance and accessories.....	107.30	107.79	106.49	108.73	107.68	108.21	109.10	106.97	106.55	105.22	103.38	105.06	105.47	104.08	101.43
Lumber and wood products.....	83.43	81.40	80.20	77.60	78.01	77.03	80.40	80.60	82.42	82.62	82.61	80.19	82.19	77.74	75.41
Sawmills and planing mills.....	79.77	78.94	77.95	75.27	75.25	75.83	78.14	78.18	79.37	79.77	80.95	79.13	80.70	75.85	73.23
Millwork, plywood, and prefabricated structural wood products.....	82.76	84.42	82.97	81.95	81.95	82.58	83.42	83.32	84.56	83.43	86.11	83.85	85.90	83.43	79.38
Wooden containers.....	62.12	62.47	60.70	59.10	59.25	59.50	60.09	59.35	61.35	62.06	61.24	60.53	61.12	59.09	56.58
Miscellaneous wood products.....	70.14	69.29	68.04	68.38	66.99	67.32	67.32	67.08	67.40	66.42	67.07	66.74	66.74	66.08	63.52
Furniture and fixtures.....	74.77	74.19	73.82	72.73	74.56	74.56	77.33	75.21	76.49	75.58	76.31	74.66	74.66	73.12	70.31
Household furniture.....	70.05	69.65	69.83	67.94	70.35	70.35	73.92	72.21	73.85	72.04	72.56	71.34	70.64	69.83	66.76
Office, public-building, and professional furniture.....	88.18	87.54	86.88	87.74	88.92	87.97	88.83	82.90	86.11	86.11	86.25	87.57	88.00	82.61	79.79
Partitions, shelving, lockers, and fixtures.....	96.88	94.00	92.10	93.26	92.80	93.73	96.05	94.66	91.94	93.99	94.35	97.71	95.91	88.03	85.97
Screens, blinds, and miscellaneous furniture and fixtures.....	77.16	76.76	72.91	74.80	75.22	74.82	78.33	73.23	74.98	71.53	73.44	74.48	75.81	73.53	71.56
Average weekly hours															
Manufacturing.....	40.0	39.9	39.3	39.7	39.8	40.3	40.6	39.9	40.3	40.3	40.5	40.2	40.7	40.2	39.2
Durable goods.....	40.4	40.4	39.9	40.3	40.4	41.0	41.1	40.1	40.9	40.8	40.8	40.5	41.4	40.8	39.5
Nondurable goods.....	39.5	39.3	38.6	38.8	39.0	39.4	39.8	39.6	39.5	39.8	40.1	39.8	39.8	39.5	38.8
Durable goods															
Ordinance and accessories.....	40.8	41.3	40.8	41.5	41.1	41.3	41.8	41.3	41.3	41.1	40.7	41.2	41.2	41.3	40.9
Lumber and wood products.....	40.5	40.1	39.9	38.8	39.4	39.3	40.2	40.1	40.5	40.7	41.1	40.5	41.3	40.7	39.9
Sawmills and planing mills.....	40.7	40.9	40.6	39.0	39.4	39.7	40.7	40.3	40.7	40.7	41.3	41.0	41.6	41.0	39.8
Millwork, plywood, and prefabricated structural wood products.....	39.6	40.2	39.7	39.4	39.4	39.7	40.3	40.3	40.8	40.5	41.6	40.9	41.7	41.1	40.5
Wooden containers.....	40.6	41.1	40.2	39.4	39.5	40.2	40.6	40.1	40.9	40.3	41.1	40.9	41.3	40.2	39.5
Miscellaneous wood products.....	41.5	41.0	40.5	40.7	40.6	40.8	40.8	40.9	41.1	40.5	41.4	41.2	41.2	41.3	40.2
Furniture and fixtures.....	40.2	40.1	39.9	39.1	40.3	40.3	41.8	41.1	41.8	41.3	41.7	40.8	40.8	40.4	39.5
Household furniture.....	39.8	39.8	39.9	38.6	40.2	40.2	42.0	41.5	42.2	41.4	41.7	41.0	40.6	40.6	39.5
Office, public-building, and professional furniture.....	41.4	41.1	40.6	41.0	41.0	41.3	41.9	39.9	41.4	41.2	42.5	41.7	41.1	40.1	39.5
Partitions, shelving, lockers, and fixtures.....	41.4	40.6	39.7	40.2	40.0	40.4	41.4	40.8	40.5	41.0	41.2	38.3	41.7	39.3	38.9
Screens, blinds, and miscellaneous furniture and fixtures.....	40.4	40.4	39.2	40.0	39.8	39.8	40.5	39.8	40.5	39.3	40.8	40.7	41.2	40.4	40.2
Average hourly earnings															
Manufacturing.....	\$2.29	\$2.29	\$2.28	\$2.29	\$2.29	\$2.29	\$2.27	\$2.23	\$2.21	\$2.22	\$2.19	\$2.23	\$2.24	\$2.22	\$2.13
Durable goods.....	2.45	2.44	2.24	2.45	2.45	2.46	2.43	2.38	2.36	2.37	2.35	2.39	2.40	2.38	2.28
Nondurable goods.....	2.08	2.07	2.06	2.06	2.08	2.05	2.04	2.03	2.02	2.03	2.00	2.01	2.00	2.00	1.94
Durable goods															
Ordinance and accessories.....	2.63	2.61	2.61	2.62	2.62	2.62	2.61	2.59	2.58	2.56	2.54	2.55	2.56	2.52	2.48
Lumber and wood products.....	2.06	2.03	2.01	2.00	1.98	1.96	2.00	2.01	2.02	2.03	2.01	1.98	1.99	1.91	1.89
Sawmills and planing mills.....	1.96	1.93	1.92	1.93	1.91	1.91	1.92	1.94	1.95	1.96	1.96	1.93	1.94	1.85	1.84
Millwork, plywood, and prefabricated structural wood products.....	2.09	2.10	2.09	2.08	2.08	2.08	2.07	2.08	2.08	2.06	2.07	2.05	2.06	2.03	1.96
Wooden containers.....	1.53	1.52	1.51	1.50	1.50	1.48	1.48	1.48	1.50	1.54	1.49	1.48	1.48	1.47	1.44
Miscellaneous wood products.....	1.69	1.69	1.68	1.68	1.65	1.65	1.65	1.64	1.64	1.64	1.62	1.62	1.62	1.60	1.58
Furniture and fixtures.....	1.86	1.85	1.85	1.86	1.85	1.85	1.85	1.83	1.83	1.83	1.83	1.83	1.83	1.81	1.78
Household furniture.....	1.76	1.75	1.75	1.76	1.75	1.75	1.76	1.74	1.74	1.75	1.74	1.74	1.74	1.72	1.69
Office, public-building, and professional furniture.....	2.13	2.13	2.14	2.14	2.12	2.13	2.12	2.08	2.08	2.09	2.10	2.10	2.09	2.06	2.02
Partitions, shelving, lockers, and fixtures.....	2.34	2.33	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.27	2.29	2.29	2.29	2.24	2.21
Screens, blinds, and miscellaneous furniture and fixtures.....	1.91	1.90	1.86	1.87	1.89	1.88	1.86	1.84	1.85	1.82	1.80	1.83	1.84	1.82	1.78

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1969						Annual average		
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
	Average weekly earnings														
Manufacturing—Continued															
Durable goods—Continued															
Stone, clay, and glass products.....	\$93.07	\$92.84	\$91.08	\$90.87	\$90.85	\$91.30	\$92.25	\$91.89	\$91.88	\$91.43	\$92.35	\$92.13	\$92.16	\$90.83	\$84.80
Flat glass.....	124.26	124.97	123.78	124.74	123.46	126.80	127.39	127.58	130.00	133.34	125.76	131.00	134.94	113.46	113.10
Glass and glassware, pressed or blown.....	92.63	93.15	89.47	91.88	90.63	89.95	88.93	88.65	88.18	84.36	88.80	88.36	87.78	88.13	85.75
Glass products made of purchased glass.....	73.82	72.95	71.82	70.50	71.62	70.87	75.14	74.21	74.56	72.68	72.71	73.68	74.70	73.45	71.55
Cement, hydraulic.....	106.14	104.14	101.18	97.66	98.15	100.04	101.02	103.25	99.96	106.17	101.02	101.09	98.88	98.98	92.92
Structural clay products.....	83.22	83.23	83.03	79.78	80.19	80.40	82.21	81.61	80.90	82.19	82.19	81.77	80.39	75.25	73.24
Pottery and related products.....	82.24	81.70	81.75	81.79	80.30	80.14	82.60	80.98	81.87	80.35	81.24	78.44	79.80	79.80	73.24
Concrete, gypsum, and plaster products.....	94.60	93.74	92.02	87.08	89.03	88.83	91.14	90.93	93.72	94.13	95.82	95.87	95.88	91.96	89.43
Cut-stone and stone products.....	77.46	78.81	77.61	72.20	75.14	75.48	76.96	73.26	77.75	75.99	76.22	74.74	76.09	75.44	73.31
Miscellaneous nonmetallic mineral products.....	96.72	97.44	95.84	98.29	98.29	99.01	98.53	95.24	95.94	96.46	97.58	97.58	97.86	96.93	87.90
Primary metal industries.....	100.80	109.70	112.29	114.29	115.26	117.96	117.14	107.86	105.74	106.40	104.81	108.19	118.43	112.72	100.97
Blast furnaces, steel works, and rolling mills.....	115.81	116.21	122.22	122.89	123.60	128.54	127.72	113.10	116.66	118.73	113.09	111.29	129.38	122.28	109.00
Iron and steel foundries.....	98.00	96.61	95.48	99.00	99.28	100.35	99.29	94.28	96.14	96.14	98.16	98.49	101.02	97.44	85.58
Primary smelting and refining of nonferrous metals.....	108.77	108.47	112.25	108.05	107.04	108.62	108.86	108.92	108.53	111.90	104.52	105.26	104.86	105.93	99.05
Secondary smelting and refining of nonferrous metals.....	93.03	95.06	94.77	95.06	94.66	95.76	96.05	96.25	95.66	96.22	98.49	91.71	94.63	94.16	88.84
Rolling, drawing, and alloying of nonferrous metals.....	110.83	108.54	106.53	107.87	108.54	109.20	110.92	109.45	109.45	107.71	108.09	111.30	113.85	110.62	100.90
Nonferrous foundries.....	101.91	101.70	97.32	100.00	101.00	113.16	102.92	100.61	103.88	101.76	99.39	99.55	100.77	100.28	93.66
Miscellaneous primary metal industries.....	109.85	110.12	110.40	115.08	117.88	118.72	117.82	107.96	108.81	111.11	110.97	113.99	118.71	113.85	102.81
Average weekly hours															
Stone, clay, and glass products.....	41.0	40.9	40.3	39.9	40.2	40.4	41.0	40.8	41.2	41.0	41.6	41.5	41.7	41.1	40.0
Flat glass.....	39.7	39.8	39.8	39.6	39.2	40.0	40.7	40.5	41.4	42.6	40.7	41.9	42.3	41.6	38.6
Glass and glassware, pressed or blown.....	40.1	40.5	38.9	40.3	40.1	39.8	39.7	39.4	39.9	38.0	40.0	39.8	39.9	39.7	39.7
Glass products made of purchased glass.....	38.9	38.6	38.0	37.3	38.3	37.9	40.4	39.9	40.3	39.5	39.3	39.5	40.6	39.7	39.1
Cement, hydraulic.....	41.3	41.0	40.8	39.7	39.9	40.5	40.9	41.3	40.8	41.8	41.4	41.6	41.2	40.9	40.4
Structural clay products.....	41.2	41.0	40.7	39.3	39.7	40.0	40.7	40.6	40.7	40.4	41.3	41.3	41.3	40.6	39.4
Pottery and related products.....	37.9	38.0	38.2	38.4	37.7	37.1	38.6	38.2	38.8	37.9	38.5	37.0	38.0	38.0	35.9
Concrete, gypsum, and plaster products.....	44.0	43.4	42.8	40.5	41.8	42.3	43.4	43.3	44.0	44.4	45.2	45.2	45.3	44.0	43.0
Cut-stone and stone products.....	41.2	41.7	41.5	38.2	40.4	40.8	41.6	40.9	41.8	41.3	41.2	40.4	41.4	41.0	40.5
Miscellaneous nonmetallic mineral products.....	40.3	40.6	40.1	41.3	41.3	41.6	41.4	40.7	41.0	41.4	41.7	41.7	42.0	41.6	39.8
Primary metal industries.....	38.8	38.9	39.4	40.1	40.3	41.1	41.1	38.8	39.9	40.0	39.7	38.5	41.7	40.4	38.1
Blast furnaces, steel works, and rolling mills.....	37.6	38.1	39.3	39.9	40.0	41.2	41.2	37.7	38.0	38.3	38.6	35.9	41.6	39.7	37.8
Iron and steel foundries.....	39.2	38.5	38.5	39.6	39.7	40.3	40.2	38.8	39.4	39.4	39.9	40.7	41.4	40.1	37.2
Primary smelting and refining of nonferrous metals.....	41.2	41.4	42.2	41.4	40.7	41.3	40.1	41.1	40.8	41.6	40.3	40.8	40.8	40.9	40.1
Secondary smelting and refining of nonferrous metals.....	40.1	40.8	40.5	40.8	40.8	41.1	41.4	41.5	41.6	42.2	41.7	40.4	41.5	41.3	40.3
Rolling, drawing, and alloying of nonferrous metals.....	41.2	40.5	39.9	40.4	40.5	40.9	41.7	41.3	41.3	40.8	41.1	42.0	42.8	41.9	40.2
Nonferrous foundries.....	40.6	40.6	39.4	40.4	40.4	41.1	41.8	40.9	41.6	41.2	40.9	40.8	41.3	41.1	39.6
Miscellaneous primary metal industries.....	39.8	39.9	40.0	41.1	41.8	42.1	41.9	39.4	40.3	41.0	41.1	41.3	42.7	41.4	39.2
Average hourly earnings															
Stone, clay, and glass products.....	\$2.27	\$2.27	\$2.26	\$2.27	\$2.26	\$2.26	\$2.25	\$2.24	\$2.23	\$2.23	\$2.22	\$2.22	\$2.21	\$2.21	\$2.12
Flat glass.....	3.13	3.14	3.11	3.15	3.16	3.17	3.13	3.15	3.14	3.13	3.09	3.15	3.19	3.16	2.98
Glass and glassware, pressed or blown.....	2.31	2.30	2.30	2.28	2.26	2.26	2.24	2.23	2.21	2.22	2.22	2.22	2.20	2.22	2.16
Glass products made of purchased glass.....	1.89	1.89	1.89	1.89	1.87	1.87	1.86	1.86	1.85	1.84	1.85	1.84	1.84	1.85	1.83
Cement, hydraulic.....	2.57	2.54	2.48	2.46	2.46	2.47	2.47	2.40	2.45	2.54	2.44	2.43	2.40	2.42	2.30
Structural clay products.....	2.02	2.03	2.04	2.03	2.02	2.01	2.02	2.01	1.99	2.00	1.99	1.99	1.98	1.98	1.91
Pottery and related products.....	2.17	2.15	2.14	2.13	2.13	2.16	2.14	2.12	2.11	2.12	2.11	2.12	2.10	2.10	2.04
Concrete, gypsum, and plaster products.....	2.15	2.16	2.15	2.15	2.13	2.10	2.10	2.10	2.13	2.12	2.12	2.11	2.11	2.09	2.01
Cut-stone and stone products.....	1.88	1.89	1.87	1.89	1.86	1.85	1.85	1.84	1.86	1.84	1.85	1.85	1.85	1.84	1.81
Miscellaneous nonmetallic mineral products.....	2.40	2.40	2.39	2.38	2.38	2.38	2.38	2.34	2.34	2.33	2.34	2.34	2.33	2.33	2.21
Primary metal industries.....	2.83	2.82	2.85	2.85	2.86	2.87	2.85	2.78	2.65	2.66	2.64	2.81	2.84	2.79	2.66
Blast furnaces, steel works, and rolling mills.....	3.08	3.05	3.11	3.08	3.09	3.12	3.10	3.00	3.07	3.10	3.09	3.10	3.11	3.08	2.88
Iron and steel foundries.....	2.60	2.49	2.48	2.50	2.50	2.49	2.47	2.43	2.44	2.44	2.41	2.42	2.44	2.43	2.31
Primary smelting and refining of nonferrous metals.....	2.64	2.62	2.66	2.61	2.63	2.63	2.64	2.65	2.66	2.69	2.60	2.58	2.57	2.59	2.47
Secondary smelting and refining of nonferrous metals.....	2.32	2.33	2.34	2.33	2.32	2.33	2.32	2.32	2.30	2.26	2.29	2.27	2.28	2.28	2.21
Rolling, drawing, and alloying of nonferrous metals.....	2.69	2.68	2.67	2.67	2.68	2.67	2.66	2.65	2.65	2.64	2.63	2.65	2.66	2.64	2.51
Nonferrous foundries.....	2.51	2.50	2.47	2.49	2.50	2.51	2.48	2.46	2.49	2.47	2.45	2.44	2.44	2.44	2.35
Miscellaneous primary metal industries.....	2.76	2.76	2.76	2.80	2.82	2.82	2.80	2.74	2.70	2.71	2.70	2.76	2.78	2.78	2.61

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959						Annual average		
	June <sup>2</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
	Average weekly earnings														
Manufacturing—Continued															
Durable goods—Continued															
Fabricated metal products.....	\$99.96	\$99.96	\$96.56	\$98.42	\$98.42	\$100.94	\$99.77	\$94.64	\$96.76	\$99.66	\$99.01	\$97.17	\$99.72	\$97.41	\$90.80
Tin cans and other tinware.....	117.43	116.47	111.66	108.94	108.40	111.25	112.10	110.24	108.24	127.32	117.55	113.85	113.42	112.35	104.42
Cutlery, handtools, and hardware.....	93.20	93.90	90.85	92.63	91.31	98.00	96.79	88.91	91.02	93.71	92.03	92.25	93.34	92.25	86.15
Heating apparatus (except electric) and plumbers' supplies.....	92.51	92.28	89.71	91.42	91.42	91.34	92.34	90.02	92.63	92.00	94.25	92.29	93.43	91.83	87.91
Fabricated structural metal products.....	102.26	100.86	98.74	97.60	97.51	98.25	98.58	94.62	96.56	97.75	98.64	97.77	100.19	96.72	93.43
Metal stamping, coating, and engraving.....	106.66	108.00	102.21	105.57	107.78	111.54	107.70	99.14	103.07	106.25	107.00	102.75	105.15	102.58	92.63
Lighting fixtures.....	90.63	89.60	86.02	88.44	88.62	90.72	90.39	84.77	87.72	95.22	96.27	86.46	91.12	87.72	80.17
Fabricated wire products.....	88.53	89.38	87.91	90.32	90.94	93.56	93.53	89.95	89.01	88.80	86.80	86.40	92.60	89.60	83.74
Miscellaneous fabricated metal products.....	95.91	95.75	93.77	98.29	98.95	98.77	98.00	93.00	96.28	96.74	96.98	97.81	101.48	97.44	88.53
Machinery (except electrical).....	105.88	106.14	104.04	105.47	104.55	105.32	105.92	102.82	103.82	103.16	102.94	103.25	104.75	103.25	94.25
Engines and turbines.....	113.15	113.15	108.38	112.20	110.02	113.01	112.48	110.16	109.76	106.88	110.95	108.81	112.44	110.42	102.26
Agricultural machinery and tractors.....	102.80	102.91	102.80	102.82	100.75	103.74	102.82	100.49	102.31	101.89	101.35	103.81	106.55	104.00	95.59
Construction and mining machinery.....	102.77	102.47	101.05	100.65	99.15	100.10	101.09	97.81	99.14	101.27	103.07	102.34	105.72	101.35	91.89
Metalworking machinery.....	122.52	123.36	120.37	123.76	120.80	119.35	118.48	115.72	115.02	113.10	113.21	114.33	115.83	114.06	101.38
Special industry machinery (except metalworking machinery).....	101.94	102.12	99.66	102.43	101.28	101.58	101.81	100.25	101.89	99.36	97.81	97.58	99.22	98.05	89.55
General industrial machinery.....	103.41	103.16	101.34	101.84	100.85	101.84	105.00	102.18	101.76	100.61	101.43	101.43	102.41	100.94	93.06
Office and store machines and devices.....	103.42	103.28	101.20	103.12	102.36	102.87	102.56	102.41	101.00	100.50	96.43	99.80	99.38	98.89	93.30
Service industry and household machines.....	98.89	96.14	98.00	96.62	96.29	98.74	102.51	93.65	98.25	97.36	96.96	96.96	98.16	97.20	90.68
Miscellaneous machinery parts.....	100.60	100.85	98.70	100.85	102.09	102.69	102.67	99.88	101.84	102.67	100.86	102.83	103.81	101.43	92.73
Average weekly hours															
Fabricated metal products.....	40.8	40.8	39.9	40.5	40.5	41.2	41.4	40.1	41.0	41.7	41.6	41.9	41.9	41.1	40.0
Tin cans and other tinware.....	42.7	42.2	40.9	40.2	40.0	40.9	42.3	41.6	41.0	45.8	43.7	42.8	42.8	42.4	41.6
Cutlery, handtools, and hardware.....	40.0	40.3	39.5	40.1	39.7	41.7	41.9	40.6	41.0	41.1	40.9	41.0	41.3	41.0	39.7
Heating apparatus (except electric) and plumbers' supplies.....	39.2	39.1	38.5	38.9	38.9	39.2	39.8	38.8	40.1	40.0	40.8	40.3	40.8	40.1	39.6
Fabricated structural metal products.....	41.4	41.0	40.3	40.0	39.8	40.1	40.4	39.1	40.4	40.9	41.1	40.4	41.4	40.8	40.1
Metal stamping, coating, and engraving.....	41.5	41.7	40.4	41.4	42.1	42.9	42.4	40.8	41.9	42.5	42.8	41.6	42.4	41.7	40.1
Lighting fixtures.....	40.1	40.0	39.1	40.2	40.1	40.5	40.9	39.8	40.8	42.7	40.5	40.4	41.8	40.8	39.3
Fabricated wire products.....	39.7	39.9	39.6	40.5	40.6	41.4	41.7	40.7	41.4	41.3	40.9	40.0	41.9	41.1	39.5
Miscellaneous fabricated metal products.....	40.3	40.4	39.9	41.3	41.4	41.5	41.7	40.3	41.5	41.7	41.8	41.8	43.0	42.0	39.7
Machinery (except electrical).....	41.2	41.3	40.8	41.2	41.0	41.3	41.7	40.8	41.2	41.1	41.1	41.3	41.9	41.3	39.6
Engines and turbines.....	40.7	40.7	39.7	41.1	40.3	41.7	41.2	40.5	40.5	41.0	41.4	40.6	41.8	41.2	40.1
Agricultural machinery and tractors.....	40.0	40.2	40.0	39.7	38.9	39.9	39.7	38.8	39.5	39.8	39.9	40.2	41.3	40.5	39.5
Construction and mining machinery.....	40.3	40.5	40.1	40.1	39.5	40.2	40.6	39.6	40.3	41.0	41.9	41.6	42.8	41.2	39.1
Metalworking machinery.....	43.6	43.9	43.3	44.2	43.5	43.4	43.4	42.7	42.6	42.2	42.4	42.5	42.9	42.4	39.6
Special industry machinery (except metalworking machinery).....	42.3	42.2	41.7	42.5	42.2	42.5	42.6	42.3	42.6	42.1	41.8	41.7	42.4	41.9	39.8
General industrial machinery.....	41.2	41.1	40.7	40.9	40.5	40.9	42.0	41.2	41.2	40.9	41.4	41.4	41.8	41.2	39.6
Office and store machines and devices.....	40.4	40.5	40.0	40.6	40.3	40.5	40.7	40.8	40.4	40.2	39.2	40.9	40.4	40.2	39.7
Service industry and household machines.....	40.2	40.3	40.0	39.6	40.2	40.3	41.5	38.7	40.6	40.4	40.4	40.4	40.9	40.5	39.6
Miscellaneous machinery parts.....	40.4	40.5	39.8	40.5	41.0	41.2	41.4	40.6	41.4	41.4	41.0	41.8	42.2	41.4	39.8
Average hourly earnings															
Fabricated metal products.....	\$2.45	\$2.45	\$2.42	\$2.43	\$2.43	\$2.45	\$2.41	\$2.36	\$2.36	\$2.39	\$2.38	\$2.37	\$2.38	\$2.37	\$2.27
Tin cans and other tinware.....	2.75	2.76	2.73	2.71	2.71	2.72	2.65	2.65	2.64	2.78	2.69	2.66	2.65	2.65	2.51
Cutlery, handtools, and hardware.....	2.33	2.33	2.30	2.31	2.30	2.35	2.31	2.19	2.22	2.28	2.25	2.25	2.26	2.25	2.17
Heating apparatus (except electric) and plumbers' supplies.....	2.36	2.36	2.33	2.35	2.35	2.33	2.32	2.32	2.31	2.30	2.31	2.29	2.29	2.29	2.22
Fabricated structural metal products.....	2.47	2.46	2.45	2.44	2.45	2.45	2.44	2.43	2.39	2.39	2.40	2.42	2.42	2.40	2.33
Metal stamping, coating, and engraving.....	2.57	2.59	2.53	2.55	2.56	2.60	2.54	2.43	2.46	2.50	2.50	2.47	2.48	2.46	2.31
Lighting fixtures.....	2.26	2.24	2.20	2.20	2.21	2.24	2.21	2.13	2.15	2.23	2.13	2.14	2.18	2.15	2.04
Fabricated wire products.....	2.23	2.24	2.22	2.23	2.24	2.26	2.25	2.21	2.15	2.15	2.11	2.16	2.21	2.18	2.13
Miscellaneous fabricated metal products.....	2.38	2.37	2.35	2.38	2.39	2.38	2.35	2.31	2.32	2.32	2.32	2.34	2.36	2.32	2.23
Machinery (except electrical).....	2.57	2.57	2.55	2.56	2.55	2.55	2.54	2.52	2.52	2.51	2.49	2.50	2.50	2.50	2.38
Engines and turbines.....	2.78	2.78	2.73	2.73	2.73	2.71	2.73	2.72	2.71	2.68	2.68	2.68	2.69	2.68	2.55
Agricultural machinery and tractors.....	2.57	2.56	2.57	2.59	2.59	2.60	2.59	2.59	2.59	2.56	2.54	2.57	2.58	2.57	2.43
Construction and mining machinery.....	2.55	2.53	2.52	2.51	2.51	2.49	2.49	2.47	2.46	2.47	2.46	2.46	2.47	2.46	2.35
Metalworking machinery.....	2.81	2.81	2.78	2.80	2.77	2.75	2.78	2.71	2.70	2.68	2.67	2.69	2.70	2.69	2.56
Special industry machinery (except metalworking machinery).....	2.41	2.42	2.39	2.41	2.40	2.39	2.39	2.37	2.38	2.36	2.34	2.34	2.34	2.34	2.25
General industrial machinery.....	2.61	2.61	2.49	2.49	2.49	2.49	2.50	2.48	2.47	2.46	2.45	2.45	2.45	2.45	2.35
Office and store machines and devices.....	2.56	2.55	2.53	2.54	2.54	2.54	2.53	2.51	2.50	2.50	2.46	2.44	2.45	2.45	2.35
Service industry and household machines.....	2.46	2.46	2.45	2.44	2.47	2.45	2.47	2.42	2.42	2.41	2.40	2.40	2.40	2.40	2.29
Miscellaneous machinery parts.....	2.49	2.49	2.48	2.49	2.49	2.49	2.48	2.46	2.46	2.48	2.46	2.46	2.46	2.45	2.33

See footnotes at end of table.



TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959						Annual average			
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958	
Average weekly earnings																
Manufacturing—Continued																
Durable goods—Continued																
Electrical machinery.....	\$92.23	\$91.37	\$88.98	\$91.43	\$90.97	\$92.80	\$93.07	\$90.72	\$91.29	\$90.76	\$90.91	\$90.02	\$90.58	\$90.91	\$85.14	
Electrical generating, transmission, distribution, and industrial apparatus.....	96.88	96.24	94.25	96.15	95.84	96.87	97.88	95.18	94.30	94.13	94.19	94.00	96.00	94.19	89.72	
Electrical appliances.....	91.64	91.80	89.17	91.10	91.80	91.01	91.03	89.55	91.48	89.67	88.48	89.04	89.27	89.27	85.26	
Insulated wire and cable.....	90.10	88.62	84.66	89.46	89.24	88.39	88.15	88.70	88.06	88.30	84.46	85.94	89.24	87.15	86.11	
Electrical equipment for vehicles.....	97.32	98.55	95.40	96.33	98.65	104.25	101.82	91.54	94.08	96.80	89.62	94.47	96.46	96.56	89.47	
Electric lamps.....	86.75	87.30	86.41	88.36	87.42	89.91	91.24	92.77	93.21	89.19	86.48	83.95	85.84	88.13	80.87	
Communication equipment.....	89.24	87.34	85.19	88.18	87.34	89.10	88.73	88.32	88.99	88.15	87.51	85.14	86.87	86.80	81.97	
Miscellaneous electrical products.....	88.43	89.65	89.20	89.60	88.65	91.13	93.18	90.42	90.67	89.40	89.79	90.01	88.34	88.94	85.08	
Transportation equipment.....	110.97	111.66	107.59	110.84	111.79	115.92	110.70	104.66	109.62	108.40	108.14	108.53	109.06	107.73	100.69	
Motor vehicles and equipment.....	112.46	113.85	108.23	113.83	116.62	124.11	113.29	102.38	113.63	111.48	110.15	111.10	111.22	110.16	98.96	
Aircraft and parts.....	110.84	110.29	107.07	109.34	108.81	108.40	109.88	108.00	108.26	107.06	107.18	106.78	107.98	106.63	101.91	
Ship and boat building and repairing.....	105.34	105.46	103.49	103.62	102.31	101.92	102.44	101.26	99.20	99.84	102.57	102.70	100.74	101.40	98.00	
Railroad equipment.....	109.48	111.39	110.26	112.18	102.11	110.15	109.69	102.65	103.47	106.70	110.12	111.38	113.42	107.41	100.70	
Other transportation equipment.....	86.97	86.63	84.58	84.10	87.42	87.07	89.82	86.41	91.17	89.98	91.05	86.43	90.23	89.13	82.74	
Average weekly hours																
Electrical machinery.....	40.1	39.9	39.2	40.1	39.9	40.7	41.0	40.5	40.8	40.7	40.5	40.1	40.8	40.5	39.6	
Electrical generating, transmission, distribution, and industrial apparatus.....	40.2	40.1	39.6	40.4	40.1	40.7	41.3	40.5	40.3	40.4	40.6	40.6	41.2	40.6	39.7	
Electrical appliances.....	39.5	39.4	38.6	39.1	39.4	39.4	40.1	39.8	40.3	39.5	39.5	39.4	39.6	39.6	38.8	
Insulated wire and cable.....	42.5	42.2	40.9	42.6	42.7	42.7	43.0	41.4	41.1	40.9	40.8	41.4	42.7	41.9	41.4	
Electrical equipment for vehicles.....	39.4	39.9	39.1	39.4	40.1	41.7	41.1	38.3	39.2	40.0	38.3	40.2	40.7	40.4	38.9	
Electric lamps.....	38.9	39.5	39.1	39.8	39.2	40.5	41.1	41.6	41.8	41.1	40.6	39.6	40.3	40.8	39.3	
Communication equipment.....	40.2	39.7	38.9	39.9	39.7	40.5	40.7	40.7	41.2	41.0	40.7	39.6	40.5	40.4	39.6	
Miscellaneous electrical products.....	39.3	40.2	40.0	40.0	39.4	40.5	41.6	41.1	41.4	41.2	41.0	41.1	40.9	40.8	40.3	
Transportation equipment.....	40.5	40.9	39.7	40.6	40.8	42.0	40.7	39.2	40.6	40.6	40.2	40.8	41.0	40.5	39.8	
Motor vehicles and equipment.....	40.6	41.1	39.5	40.8	41.5	43.7	40.9	38.2	41.1	40.1	40.2	41.3	41.5	40.8	39.2	
Aircraft and parts.....	40.9	41.0	40.1	40.8	40.6	40.6	41.0	40.6	40.7	40.4	40.6	40.6	40.9	40.7	40.6	
Ship and boat building and repairing.....	39.6	40.1	39.5	39.4	39.2	38.9	39.1	38.5	38.3	38.4	39.0	39.2	39.2	39.0	39.2	
Railroad equipment.....	39.1	39.5	39.1	39.5	39.6	39.2	39.6	37.6	37.9	38.8	39.9	40.5	40.5	39.2	38.0	
Other transportation equipment.....	39.0	39.2	38.8	38.4	39.2	39.4	40.1	39.1	40.7	40.9	41.2	40.2	41.2	40.7	39.4	
Average hourly earnings																
Electrical machinery.....	\$2.30	\$2.29	\$2.27	\$2.28	\$2.28	\$2.28	\$2.27	\$2.24	\$2.24	\$2.23	\$2.23	\$2.22	\$2.22	\$2.22	\$2.15	
Electrical generating, transmission, distribution, and industrial apparatus.....	2.41	2.40	2.38	2.38	2.39	2.38	2.37	2.35	2.34	2.33	2.32	2.33	2.33	2.32	2.26	
Electrical appliances.....	2.32	2.33	2.31	2.33	2.33	2.31	2.27	2.25	2.27	2.27	2.24	2.26	2.26	2.26	2.20	
Insulated wire and cable.....	2.12	2.10	2.07	2.10	2.09	2.07	2.05	2.07	2.07	2.11	2.07	2.10	2.09	2.08	2.08	
Electrical equipment for vehicles.....	2.47	2.47	2.44	2.45	2.46	2.50	2.47	2.39	2.40	2.42	2.34	2.35	2.37	2.39	2.30	
Electric lamps.....	2.23	2.21	2.21	2.22	2.23	2.22	2.23	2.23	2.23	2.17	2.13	2.12	2.13	2.16	2.05	
Communication equipment.....	2.22	2.20	2.19	2.21	2.20	2.20	2.18	2.17	2.16	2.15	2.15	2.15	2.14	2.15	2.07	
Miscellaneous electrical products.....	2.25	2.23	2.23	2.24	2.25	2.25	2.24	2.20	2.19	2.17	2.19	2.19	2.16	2.18	2.11	
Transportation equipment.....	2.74	2.73	2.71	2.73	2.74	2.76	2.72	2.67	2.70	2.71	2.69	2.66	2.66	2.66	2.53	
Motor vehicles and equipment.....	2.77	2.77	2.74	2.79	2.81	2.84	2.77	2.68	2.75	2.78	2.74	2.69	2.68	2.70	2.55	
Aircraft and parts.....	2.71	2.69	2.67	2.68	2.68	2.67	2.68	2.66	2.66	2.65	2.64	2.63	2.64	2.62	2.51	
Ship and boat building and repairing.....	2.66	2.63	2.62	2.63	2.61	2.62	2.62	2.63	2.59	2.60	2.63	2.62	2.57	2.60	2.50	
Railroad equipment.....	2.80	2.82	2.82	2.84	2.79	2.81	2.77	2.73	2.73	2.75	2.76	2.75	2.78	2.74	2.65	
Other transportation equipment.....	2.23	2.21	2.18	2.19	2.23	2.21	2.24	2.21	2.24	2.20	2.21	2.15	2.19	2.19	2.10	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959								Annual average	
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958	
	Average weekly earnings															
Manufacturing—Continued																
Durable goods—Continued																
Instruments and related products.....	\$95.41	\$94.77	\$93.43	\$95.88	\$94.07	\$94.19	\$96.23	\$94.71	\$94.53	\$93.80	\$93.48	\$93.71	\$94.35	\$93.25	\$87.28	
Laboratory, scientific, and engineering instruments.....	114.95	112.88	110.97	116.75	113.57	112.05	116.14	112.44	112.14	110.66	112.63	109.93	112.10	111.14	103.07	
Mechanical measuring and controlling instruments.....	93.67	93.90	92.80	95.06	92.34	93.51	94.94	92.97	92.80	91.80	91.98	93.52	95.30	92.62	86.73	
Optical instruments and lenses.....	98.53	98.36	94.13	96.00	97.11	95.96	97.48	92.57	95.68	95.63	93.94	93.30	90.05	92.25	88.51	
Surgical, medical, and dental instruments.....	85.69	83.62	81.80	84.66	82.99	83.84	83.64	83.84	83.44	84.87	83.03	83.64	82.62	82.82	78.00	
Ophthalmic goods.....	78.61	80.40	79.20	79.18	79.60	79.19	79.59	79.38	77.39	76.44	77.97	78.94	78.55	77.59	71.41	
Photographic apparatus.....	106.86	106.34	105.82	106.86	104.90	104.86	109.65	108.20	107.43	105.98	104.55	105.32	105.32	104.65	97.53	
Watches and clocks.....	78.01	77.41	75.65	77.03	76.82	77.81	77.41	78.80	80.57	79.77	79.15	77.01	77.42	77.41	73.71	
Miscellaneous manufacturing industries.....	77.41	77.41	76.05	78.18	77.81	78.20	78.76	77.16	77.33	76.95	76.76	75.60	76.95	76.57	73.26	
Jewelry, silverware, and plated ware.....	80.16	80.77	80.16	80.54	79.35	79.10	84.91	83.66	83.46	81.25	79.68	75.17	77.87	79.45	75.70	
Musical instruments and parts.....	90.58	87.38	86.58	88.32	88.70	88.32	92.42	92.18	93.94	91.78	88.34	85.24	86.93	88.99	83.79	
Toys and sporting goods.....	69.45	71.16	69.32	71.53	70.80	70.64	70.59	70.62	70.75	70.80	68.73	67.69	67.09	69.17	66.91	
Pens, pencils, other office supplies.....	70.88	72.18	69.95	70.88	70.92	70.13	71.96	70.80	70.58	70.75	71.88	66.82	71.69	70.58	67.72	
Costume jewelry, buttons, notions.....	70.05	68.29	66.33	68.73	69.17	69.52	69.48	68.64	69.87	70.58	69.30	66.39	70.88	68.90	65.18	
Fabricated plastics products.....	83.23	83.03	80.40	83.02	83.23	84.04	83.83	82.39	83.40	83.00	83.00	83.00	83.82	83.20	79.17	
Other manufacturing industries.....	80.19	81.00	79.59	82.01	80.79	81.00	81.20	78.41	78.79	78.41	79.99	79.79	81.00	79.40	76.04	
Average weekly hours																
Instruments and related products.....	40.5	40.5	40.1	40.8	40.2	40.6	41.3	41.0	41.1	41.0	41.0	41.1	41.2	40.9	39.9	
Laboratory, scientific, and engineering instruments.....	41.8	41.5	41.1	42.3	41.6	41.5	42.7	41.8	42.0	41.6	42.5	41.8	42.3	42.1	40.9	
Mechanical measuring and controlling instruments.....	40.2	40.3	40.0	40.8	39.8	40.7	41.1	40.6	40.7	40.8	40.7	41.2	41.8	40.8	39.6	
Optical instruments and lenses.....	41.4	41.5	40.4	41.2	41.5	40.8	42.2	40.6	41.6	41.4	40.8	41.1	40.2	41.0	40.6	
Surgical, medical, and dental instruments.....	41.0	40.2	39.9	40.7	39.9	40.5	40.8	40.6	40.7	41.2	40.5	41.0	40.7	40.6	40.0	
Ophthalmic goods.....	39.7	40.4	39.8	39.2	40.0	40.2	40.4	40.5	40.1	39.4	40.4	40.9	40.7	40.2	38.6	
Photographic apparatus.....	41.1	40.9	40.7	41.1	40.5	40.8	42.5	42.1	41.8	41.4	41.0	41.3	41.3	41.2	40.3	
Watches and clocks.....	39.2	38.9	38.4	39.1	38.8	39.3	38.9	40.0	40.9	40.7	40.8	39.9	39.7	39.9	39.0	
Miscellaneous manufacturing industries.....	39.9	39.9	39.2	40.3	39.9	40.1	40.6	40.4	40.7	40.8	40.4	40.0	40.8	40.3	39.6	
Jewelry, silverware, and plated ware.....	40.9	41.0	40.9	41.3	40.9	41.2	43.1	42.9	42.8	42.1	41.5	40.2	41.2	41.6	40.7	
Musical instruments and parts.....	40.8	39.9	39.9	40.7	40.5	40.7	42.2	41.9	42.7	42.1	40.9	40.4	41.2	41.2	39.9	
Toys and sporting goods.....	38.8	39.1	38.3	39.3	38.9	38.6	39.0	39.9	40.2	40.0	39.5	38.9	38.9	39.3	38.9	
Pens, pencils, other office supplies.....	39.6	40.1	39.3	39.6	39.4	39.4	40.2	40.0	40.1	40.2	40.6	39.1	40.5	40.1	39.6	
Costume jewelry, buttons, notions.....	39.8	38.8	37.9	39.5	39.3	39.5	39.7	39.0	39.7	40.1	39.6	38.6	40.5	39.6	38.8	
Fabricated plastics products.....	40.8	40.9	39.8	41.1	41.0	41.4	41.5	41.4	41.7	41.5	41.5	41.7	41.7	41.6	40.6	
Other manufacturing industries.....	39.7	39.9	39.4	40.4	39.8	39.9	40.4	39.8	40.2	39.8	40.4	40.3	40.5	40.1	39.4	
Average hourly earnings																
Instruments and related products.....	\$2.35	\$2.34	\$2.33	\$2.35	\$2.34	\$2.32	\$2.33	\$2.31	\$2.30	\$2.29	\$2.28	\$2.28	\$2.29	\$2.28	\$2.19	
Laboratory, scientific, and engineering instruments.....	2.75	2.72	2.70	2.76	2.73	2.70	2.72	2.69	2.67	2.66	2.65	2.63	2.65	2.64	2.52	
Mechanical measuring and controlling instruments.....	2.33	2.33	2.32	2.33	2.32	2.30	2.31	2.29	2.28	2.25	2.26	2.27	2.28	2.27	2.19	
Optical instruments and lenses.....	2.38	2.37	2.33	2.33	2.34	2.33	2.31	2.28	2.30	2.31	2.30	2.27	2.24	2.25	2.18	
Surgical, medical, and dental instruments.....	2.09	2.08	2.05	2.08	2.08	2.07	2.05	2.06	2.05	2.06	2.05	2.04	2.03	2.04	1.95	
Ophthalmic goods.....	1.96	1.99	1.99	2.02	1.99	1.97	1.97	1.96	1.93	1.94	1.93	1.93	1.93	1.93	1.85	
Photographic apparatus.....	2.60	2.60	2.60	2.60	2.59	2.57	2.58	2.57	2.57	2.56	2.55	2.55	2.55	2.54	2.42	
Watches and clocks.....	1.99	1.99	1.97	1.97	1.98	1.98	1.99	1.97	1.97	1.96	1.94	1.93	1.95	1.94	1.89	
Miscellaneous manufacturing industries.....	1.94	1.94	1.94	1.94	1.95	1.95	1.94	1.91	1.90	1.90	1.90	1.89	1.90	1.90	1.85	
Jewelry, silverware, and plated ware.....	1.96	1.97	1.96	1.95	1.94	1.92	1.97	1.95	1.95	1.93	1.92	1.87	1.89	1.91	1.86	
Musical instruments and parts.....	2.22	2.19	2.17	2.17	2.19	2.17	2.19	2.20	2.20	2.18	2.16	2.11	2.11	2.16	2.10	
Toys and sporting goods.....	1.79	1.82	1.81	1.82	1.82	1.83	1.81	1.77	1.76	1.77	1.74	1.74	1.74	1.76	1.73	
Pens, pencils, other office supplies.....	1.79	1.80	1.78	1.79	1.80	1.78	1.79	1.77	1.76	1.76	1.77	1.76	1.77	1.76	1.71	
Costume jewelry, buttons, notions.....	1.76	1.76	1.75	1.74	1.76	1.76	1.75	1.76	1.76	1.76	1.75	1.72	1.75	1.74	1.68	
Fabricated plastics products.....	2.04	2.03	2.02	2.02	2.03	2.03	2.02	1.99	2.00	2.00	2.00	2.00	2.01	2.00	1.95	
Other manufacturing industries.....	2.02	2.03	2.02	2.03	2.03	2.03	2.01	1.97	1.96	1.97	1.98	1.98	2.00	1.98	1.93	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959								Annual average	
															1959	1958
	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958	
Average weekly earnings																
Nondurable goods																
Food and kindred products.....	\$88.51	\$88.91	\$87.16	\$86.94	\$86.33	\$88.91	\$88.78	\$87.74	\$85.68	\$86.11	\$84.87	\$85.48	\$85.69	\$85.68	\$81.81	
Meat products.....	98.49	96.55	95.74	95.01	95.26	104.66	104.73	105.22	103.05	101.29	95.06	95.53	94.60	97.23	91.05	
Dairy products.....	90.73	89.01	89.21	87.53	87.53	87.53	86.30	86.30	86.73	90.53	86.53	87.56	87.77	86.32	81.90	
Canning and preserving.....	67.86	70.05	69.75	69.75	69.17	68.74	68.15	63.47	63.74	67.82	71.65	66.52	66.42	67.64	66.13	
Grain-mill products.....	94.61	94.18	92.87	94.61	92.87	96.70	93.96	95.05	93.96	96.57	93.73	93.49	92.38	92.66	89.79	
Bakery products.....	88.75	87.05	85.79	85.39	84.56	83.92	85.22	85.01	84.42	85.67	83.21	84.25	84.25	83.21	79.00	
Sugar.....	99.66	97.61	95.58	96.77	95.04	94.51	97.31	94.77	82.62	96.59	93.84	94.56	93.89	93.10	89.73	
Confectionery and related products.....	72.62	71.50	68.92	70.67	69.38	70.49	68.90	69.55	69.65	70.47	69.45	69.92	70.27	68.90	66.30	
Beverages.....	100.37	99.79	100.19	95.16	93.03	93.90	96.07	95.26	95.59	100.67	99.60	99.90	98.77	96.80	92.23	
Miscellaneous food products.....	85.91	85.90	84.85	84.85	86.11	85.49	86.73	87.35	86.73	87.78	85.27	84.44	83.80	84.65	80.95	
Tobacco manufactures.....	71.89	68.58	64.80	59.56	61.37	66.05	67.49	64.56	63.92	63.40	65.93	70.58	67.99	65.40	62.57	
Cigarettes.....	85.28	80.26	77.17	67.47	72.76	83.23	83.64	81.81	83.00	82.20	87.44	87.31	80.60	81.80	77.85	
Cigars.....	54.52	54.43	49.48	45.05	52.26	53.20	53.11	55.58	55.34	54.53	53.06	52.78	54.14	53.02	51.79	
Tobacco and snuff.....	70.46	68.08	66.06	62.10	61.94	66.38	66.08	66.70	66.64	66.35	67.12	68.60	67.03	66.82	62.79	
Tobacco stemming and redrying.....	66.02	61.78	58.32	50.81	50.75	50.90	57.65	44.82	49.29	52.27	50.65	59.19	60.64	52.40	49.92	
Average weekly hours																
Food and kindred products.....	40.6	40.6	39.8	39.7	39.6	40.6	41.1	41.0	40.8	41.4	41.4	40.9	41.0	40.8	40.7	
Meat products.....	40.7	40.8	39.4	39.1	39.2	42.2	42.4	43.3	43.3	43.1	40.8	41.0	40.6	41.2	40.3	
Dairy products.....	42.2	41.4	41.3	40.9	40.9	40.9	40.9	40.9	41.3	42.7	41.8	42.3	42.4	41.7	42.0	
Canning and preserving.....	37.7	38.7	37.7	37.5	37.8	38.4	38.5	36.9	38.0	39.2	41.9	38.9	39.3	39.1	36.6	
Grain-mill products.....	43.4	43.4	42.6	43.2	42.6	43.5	43.1	43.6	43.5	44.3	43.8	44.1	44.2	43.5	43.8	
Bakery products.....	40.9	40.3	39.9	39.9	39.7	39.4	40.2	40.1	40.2	40.6	40.2	40.7	40.7	40.2	40.1	
Sugar.....	41.7	40.5	40.8	41.5	41.5	43.2	48.9	48.6	40.9	41.6	40.8	41.3	41.0	43.3	44.2	
Confectionery and related products.....	39.9	39.5	38.5	39.7	39.2	39.6	39.6	40.2	39.8	40.5	39.7	39.5	39.7	39.6	36.7	
Beverages.....	40.8	40.4	40.4	39.0	38.6	39.0	39.7	39.2	39.5	41.6	41.6	41.8	41.5	40.5	40.1	
Miscellaneous food products.....	41.5	41.3	40.6	40.6	41.2	41.1	41.9	42.2	41.9	42.2	41.8	41.8	41.9	41.7	41.3	
Tobacco manufactures.....	39.5	38.1	36.0	34.8	36.1	38.4	39.7	38.2	40.2	40.9	40.7	40.1	39.3	39.4	36.1	
Cigarettes.....	41.0	38.4	37.1	33.4	36.2	40.6	41.0	40.3	41.5	41.1	43.5	42.8	40.5	40.9	40.6	
Cigars.....	37.6	37.8	34.6	37.1	36.8	37.2	37.4	38.6	38.7	38.4	37.9	37.7	38.4	37.6	37.6	
Tobacco and snuff.....	38.5	37.2	36.1	34.5	34.8	37.5	38.9	37.9	38.3	37.7	38.8	39.2	38.3	38.4	37.9	
Tobacco stemming and redrying.....	39.3	37.9	36.0	34.1	35.0	36.1	40.6	33.7	40.4	43.2	40.2	37.7	37.9	39.4	36.7	
Average hourly earnings																
Food and kindred products.....	\$2.18	\$2.19	\$2.19	\$2.19	\$2.18	\$2.19	\$2.16	\$2.14	\$2.10	\$2.08	\$2.05	\$2.09	\$2.10	\$2.10	\$2.01	
Meat products.....	2.42	2.44	2.43	2.43	2.43	2.48	2.47	2.43	2.38	2.35	2.33	2.33	2.33	2.36	2.26	
Dairy products.....	2.15	2.15	2.16	2.14	2.14	2.14	2.11	2.11	2.10	2.12	2.07	2.07	2.07	2.07	1.95	
Canning and preserving.....	1.80	1.81	1.85	1.86	1.83	1.79	1.77	1.72	1.73	1.73	1.71	1.71	1.69	1.73	1.67	
Grain-mill products.....	2.18	2.17	2.18	2.19	2.18	2.20	2.18	2.18	2.16	2.18	2.14	2.12	2.09	2.13	2.05	
Bakery products.....	2.17	2.16	2.15	2.14	2.13	2.13	2.12	2.12	2.10	2.11	2.07	2.07	2.07	2.07	1.97	
Sugar.....	2.39	2.41	2.35	2.38	2.29	2.19	1.99	1.95	2.02	2.37	2.30	2.29	2.29	2.15	2.03	
Confectionery and related products.....	1.82	1.81	1.79	1.78	1.77	1.78	1.74	1.73	1.75	1.74	1.75	1.77	1.77	1.74	1.67	
Beverages.....	2.46	2.47	2.48	2.44	2.41	2.41	2.42	2.42	2.42	2.42	2.40	2.39	2.38	2.39	2.30	
Miscellaneous food products.....	2.07	2.08	2.09	2.09	2.09	2.08	2.07	2.07	2.07	2.08	2.04	2.02	2.00	2.03	1.96	
Tobacco manufactures.....	1.82	1.80	1.80	1.72	1.70	1.72	1.70	1.69	1.59	1.55	1.62	1.76	1.73	1.66	1.60	
Cigarettes.....	2.08	2.09	2.08	2.02	2.01	2.05	2.04	2.03	2.00	2.00	2.01	2.04	1.99	2.00	1.91	
Cigars.....	1.45	1.44	1.43	1.43	1.42	1.43	1.42	1.44	1.43	1.42	1.40	1.40	1.41	1.41	1.37	
Tobacco and snuff.....	1.83	1.83	1.83	1.80	1.78	1.77	1.75	1.76	1.74	1.78	1.73	1.76	1.75	1.74	1.67	
Tobacco stemming and redrying.....	1.68	1.63	1.62	1.49	1.45	1.41	1.42	1.33	1.22	1.21	1.26	1.67	1.60	1.33	1.29	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960					1959										Annual average	
	June <sup>2</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958		
Manufacturing—Continued																	
Nondurable goods—Continued																	
Average weekly earnings																	
Textile-mill products.....	\$65.69	\$65.36	\$63.76	\$63.83	\$64.16	\$64.48	\$64.87	\$64.40	\$64.40	\$63.28	\$64.87	\$63.83	\$64.46	\$63.43	\$58.29		
Scouring and combing plants.....	74.03	73.15	70.69	70.18	69.70	72.25	71.06	70.63	69.72	74.34	70.11	75.16	75.85	72.16	64.95		
Yarn and thread mills.....	59.58	59.89	59.49	58.59	59.70	60.20	60.35	59.90	59.90	59.40	60.20	59.45	60.35	58.95	52.36		
Broad-woven fabric mills.....	66.58	66.01	64.96	65.12	64.27	64.74	65.52	64.74	64.74	63.27	64.90	63.71	64.70	63.29	56.26		
Narrow fabrics and smallwares.....	68.47	66.50	65.11	66.17	65.76	65.36	66.75	65.27	65.11	65.36	64.96	65.69	66.96	65.53	60.37		
Knitting mills.....	58.67	58.22	55.95	55.48	56.47	56.32	56.75	57.96	57.66	57.45	58.71	57.13	58.41	57.61	54.75		
Dyeing and finishing textiles.....	75.00	74.05	71.28	71.05	71.10	70.58	73.78	72.53	72.31	69.66	71.04	70.45	74.22	71.48	66.53		
Carpets, rugs, other floor coverings.....	79.79	79.00	78.99	79.97	81.32	81.71	81.32	79.17	80.73	80.73	81.51	82.91	81.51	81.51	77.90		
Hats (except cloth and millinery).....	62.70	61.66	58.64	59.49	59.57	62.24	63.00	57.78	57.25	60.02	64.90	60.35	62.93	61.71	58.74		
Miscellaneous textile goods.....	77.14	75.58	73.42	74.37	76.30	77.27	76.45	72.08	74.52	74.43	74.44	75.03	73.71	68.95			
Apparel and other finished textile products.....	55.90	55.90	53.70	55.85	56.11	55.44	55.85	56.15	55.02	55.69	56.85	55.57	55.05	55.63	53.45		
Men's and boys' suits and coats.....	72.19	69.12	65.49	66.95	68.00	67.08	68.32	68.02	68.02	67.28	67.61	68.18	65.65	65.47	60.37		
Men's and boys' furnishings and work clothing.....	48.99	48.84	47.29	47.35	48.58	48.58	49.13	49.65	49.27	49.91	49.66	48.90	49.02	48.76	46.08		
Women's outerwear.....	57.29	59.00	56.10	59.69	59.86	58.14	58.99	58.48	55.76	57.61	61.24	60.20	57.29	59.51	57.63		
Women's, children's undergarments.....	50.98	51.05	48.99	50.41	51.18	50.96	51.82	53.02	52.36	51.52	51.89	50.09	51.15	51.29	49.80		
Millinery.....	56.70	55.94	54.65	67.13	71.04	65.08	60.82	58.70	60.64	67.32	68.61	64.33	65.43	62.93	64.05		
Children's outerwear.....	53.05	51.62	48.79	51.70	52.48	52.62	50.54	52.22	50.26	50.20	51.24	53.02	52.06	51.10	50.23		
Miscellaneous apparel and accessories.....	52.42	52.27	51.26	52.71	52.42	52.20	52.91	52.91	52.62	52.91	53.82	52.89	52.97	52.54	50.76		
Other fabricated textile products.....	62.27	61.66	58.67	60.96	60.38	59.78	59.97	59.52	59.90	59.75	58.75	59.28	60.13	59.59	56.85		
Average weekly hours																	
Textile-mill products.....	40.3	40.1	39.6	39.4	40.1	40.2	40.8	40.5	40.5	39.8	40.8	40.4	40.8	40.4	38.6		
Scouring and combing plants.....	42.3	41.8	41.1	40.8	41.0	42.5	41.8	40.3	42.0	41.0	43.7	44.1	44.1	42.2	40.6		
Yarn and thread mills.....	39.2	39.4	39.4	38.8	39.8	40.4	40.5	40.2	40.2	39.6	40.4	39.9	40.5	40.1	37.4		
Broad-woven fabric mills.....	41.1	41.0	40.6	40.7	41.2	41.5	42.0	41.5	41.5	40.3	41.6	41.1	41.3	41.1	38.8		
Narrow fabrics and smallwares.....	41.0	40.3	39.7	40.1	40.1	40.1	40.7	39.8	39.7	40.1	40.1	40.8	41.6	39.7	39.2		
Knitting mills.....	38.6	38.3	37.3	36.5	37.4	37.3	38.1	38.9	38.7	38.3	39.4	38.6	39.2	38.6	37.5		
Dyeing and finishing textiles.....	41.9	41.6	40.5	40.6	41.1	40.8	42.4	42.1	41.5	40.5	41.3	41.2	42.9	41.8	40.5		
Carpets, rugs, other floor coverings.....	40.3	40.1	40.3	40.8	41.7	41.9	41.7	40.6	41.4	41.4	41.8	42.3	40.9	31.8	40.9		
Hats (except cloth and millinery).....	37.1	36.7	34.7	35.2	36.1	36.4	37.5	34.6	34.7	35.1	37.3	35.5	39.8	6.3	35.6		
Miscellaneous textile goods.....	40.6	40.2	39.9	40.2	40.8	41.1	41.1	39.5	40.5	40.5	40.7	40.9	41.0	40.5	36.4		
Apparel and other finished textile products.....	36.3	36.3	35.1	35.8	36.2	36.0	36.5	36.7	36.2	36.4	37.4	36.5	36.7	36.6	35.4		
Men's and boys' suits and coats.....	38.4	38.4	37.0	37.4	38.2	37.9	38.6	38.0	37.5	37.8	38.2	37.1	37.3	37.2	34.3		
Men's and boys' furnishings and work clothing.....	37.4	37.0	36.1	35.6	36.8	36.8	37.5	37.9	37.9	38.1	38.8	38.2	38.3	37.8	36.0		
Women's outerwear.....	33.7	34.5	33.0	34.5	34.4	33.8	34.1	34.0	32.8	33.3	35.4	35.0	36.3	34.1	34.6		
Women's, children's undergarments.....	35.9	35.7	34.5	35.5	36.3	36.4	36.8	37.6	37.4	36.8	37.6	36.3	36.8	36.9	36.2		
Millinery.....	31.5	30.4	29.7	35.9	37.0	34.8	33.6	31.9	32.6	34.7	36.3	34.4	31.7	34.2	35.0		
Children's outerwear.....	37.1	36.1	34.6	35.9	36.7	36.8	36.1	37.3	35.9	35.6	36.6	37.6	37.2	36.5	36.4		
Miscellaneous apparel and accessories.....	36.4	36.3	35.6	36.1	36.4	36.5	37.0	37.0	36.8	37.0	37.9	37.3	37.3	37.0	36.0		
Other fabricated textile products.....	38.2	38.3	36.9	38.1	37.5	37.6	38.2	38.4	38.4	38.3	38.4	38.0	38.3	38.2	37.4		
Average hourly earnings																	
Textile-mill products.....	\$1.63	\$1.63	\$1.61	\$1.62	\$1.60	\$1.60	\$1.59	\$1.59	\$1.59	\$1.59	\$1.59	\$1.58	\$1.58	\$1.57	\$1.51		
Scouring and combing plants.....	1.75	1.73	1.72	1.72	1.70	1.70	1.70	1.75	1.73	1.77	1.71	1.72	1.72	1.71	1.60		
Yarn and thread mills.....	1.52	1.52	1.51	1.51	1.50	1.49	1.49	1.49	1.50	1.49	1.49	1.49	1.49	1.47	1.40		
Broad-woven fabric mills.....	1.62	1.61	1.60	1.60	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.55	1.55	1.54	1.45		
Narrow fabrics and smallwares.....	1.67	1.65	1.64	1.65	1.64	1.63	1.64	1.64	1.64	1.63	1.62	1.61	1.61	1.61	1.54		
Knitting mills.....	1.52	1.52	1.50	1.52	1.51	1.51	1.49	1.49	1.49	1.50	1.49	1.48	1.49	1.49	1.45		
Dyeing and finishing textiles.....	1.79	1.78	1.76	1.75	1.73	1.73	1.74	1.73	1.73	1.72	1.72	1.71	1.73	1.71	1.65		
Carpets, rugs, other floor coverings.....	1.98	1.97	1.96	1.96	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.95	1.95	1.89		
Hats (except cloth and millinery).....	1.69	1.68	1.69	1.69	1.65	1.71	1.68	1.67	1.65	1.71	1.74	1.70	1.71	1.70	1.65		
Miscellaneous textile goods.....	1.90	1.88	1.84	1.85	1.87	1.88	1.86	1.84	1.84	1.84	1.83	1.82	1.83	1.82	1.75		
Apparel and other finished textile products.....	1.54	1.54	1.53	1.56	1.55	1.54	1.53	1.53	1.52	1.53	1.52	1.51	1.50	1.52	1.51		
Men's and boys' suits and coats.....	1.88	1.80	1.77	1.79	1.78	1.77	1.77	1.79	1.77	1.78	1.77	1.73	1.76	1.76	1.76		
Men's and boys' furnishings and work clothing.....	1.31	1.32	1.31	1.33	1.32	1.32	1.31	1.31	1.30	1.31	1.28	1.28	1.28	1.29	1.28		
Women's outerwear.....	1.70	1.71	1.70	1.73	1.74	1.72	1.73	1.72	1.70	1.73	1.73	1.72	1.68	1.72	1.69		
Women's, children's undergarments.....	1.42	1.43	1.42	1.42	1.41	1.40	1.40	1.41	1.40	1.40	1.38	1.38	1.39	1.39	1.37		
Millinery.....	1.80	1.84	1.84	1.87	1.92	1.87	1.81	1.84	1.86	1.94	1.89	1.87	1.78	1.84	1.83		
Children's outerwear.....	1.43	1.43	1.41	1.44	1.43	1.43	1.40	1.40	1.40	1.41	1.40	1.41	1.40	1.40	1.38		
Miscellaneous apparel and accessories.....	1.44	1.44	1.44	1.46	1.44	1.43	1.43	1.43	1.43	1.43	1.42	1.41	1.42	1.42	1.41		
Other fabricated textile products.....	1.63	1.61	1.59	1.60	1.61	1.59	1.57	1.55	1.56	1.56	1.53	1.56	1.57	1.56	1.52		

See footnotes at end of table.



TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1969						Annual average		
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1969	1968
Average weekly earnings															
Nondurable goods—Continued															
Paper and allied products.....	\$96.67	\$96.05	\$93.63	\$94.30	\$94.73	\$95.20	\$95.22	\$95.22	\$95.67	\$96.77	\$95.66	\$95.08	\$94.00	\$94.16	\$98.83
Pulp, paper, and paperboard mills.....	105.46	104.64	102.15	103.29	103.97	104.24	104.48	104.72	104.48	106.32	104.08	104.78	102.75	102.73	96.10
Paperboard containers and boxes.....	89.64	88.34	86.43	86.03	86.67	87.74	86.93	88.20	89.66	90.95	90.31	87.78	87.99	87.78	82.41
Other paper and allied products.....	85.70	86.11	84.26	84.87	84.05	84.67	85.07	83.64	83.94	84.03	83.00	83.00	83.40	83.42	78.96
Printing, publishing, and allied industries															
Newspapers.....	105.54	106.37	103.95	105.05	104.12	104.56	106.96	103.79	104.83	106.70	103.79	103.53	102.87	103.41	97.90
Periodicals.....	112.99	113.31	110.05	108.72	108.42	107.45	113.31	107.76	110.00	111.96	108.32	106.02	106.63	106.28	103.43
Books.....	115.62	114.37	115.30	116.57	111.20	111.35	106.93	113.90	119.83	132.30	119.83	114.39	108.67	113.15	102.97
Commercial printing.....	93.60	94.25	91.66	91.43	89.44	91.14	92.57	90.29	91.31	92.23	93.61	90.23	90.62	90.52	85.80
Lithographing.....	104.91	105.06	103.33	105.86	103.35	105.34	106.92	104.28	104.67	106.00	102.05	102.83	101.92	102.96	97.22
Greeting cards.....	107.92	110.55	106.23	109.20	107.86	107.73	109.89	107.19	108.67	109.80	108.13	108.53	106.26	106.40	98.81
Bookbinding and related industries.....	72.88	73.53	70.48	73.54	76.63	75.08	70.10	70.25	69.72	68.60	68.40	69.50	70.02	70.07	67.03
Miscellaneous publishing and printing services.....	82.43	81.20	79.92	82.01	81.20	81.70	83.28	81.66	80.43	81.09	81.12	81.33	80.11	80.50	74.86
	114.88	115.97	115.06	117.35	118.81	118.50	118.78	117.18	114.98	117.34	116.10	116.43	115.26	116.19	110.75
Average weekly hours															
Paper and allied products.....	42.4	42.5	41.8	42.1	42.1	42.5	42.7	42.7	42.9	43.2	43.1	43.0	43.0	42.8	41.9
Pulp, paper, and paperboard mills.....	43.4	43.6	43.1	43.4	43.5	43.8	43.9	44.0	43.9	44.3	44.1	44.4	44.1	43.9	42.9
Paperboard containers and boxes.....	41.5	40.9	40.2	40.2	40.5	41.0	41.2	41.8	42.3	42.5	42.6	41.8	41.9	41.8	41.6
Other paper and allied products.....	41.4	41.8	41.1	41.4	41.0	41.3	41.7	41.2	41.3	41.6	41.8	41.5	41.7	41.5	40.7
Printing, publishing, and allied industries															
Newspapers.....	38.1	38.4	37.8	38.2	38.0	38.3	39.0	38.3	38.4	38.8	38.3	38.2	38.1	38.3	37.8
Periodicals.....	36.1	36.2	35.5	35.3	35.2	35.0	36.2	35.1	35.6	36.0	35.4	35.3	35.8	35.5	35.3
Books.....	41.0	40.7	40.6	40.9	40.0	40.2	39.9	40.7	41.9	44.1	41.9	41.0	40.1	40.7	39.3
Commercial printing.....	40.0	40.8	40.2	40.1	39.4	39.8	40.6	39.6	39.7	40.1	40.7	39.4	39.4	39.7	39.0
Lithographing.....	39.0	39.2	38.7	39.5	39.0	39.9	40.5	39.8	39.8	40.0	39.1	39.4	39.2	39.6	39.2
Greeting cards.....	39.1	40.2	39.2	40.0	39.8	39.9	40.7	39.7	40.1	40.0	39.9	39.9	39.5	39.7	38.9
Bookbinding and related industries.....	38.5	38.1	36.9	38.3	38.7	38.5	38.1	38.6	38.1	37.9	38.0	38.4	38.9	38.5	38.3
Miscellaneous publishing and printing services.....	38.7	38.3	37.7	38.5	38.3	38.4	39.1	38.7	38.3	38.8	39.0	39.1	38.7	38.7	38.0
	37.3	37.9	37.6	38.1	38.7	38.6	39.2	38.8	38.2	38.6	38.7	38.3	38.3	38.6	37.8
Average hourly earnings															
Paper and allied products.....	\$2.28	\$2.26	\$2.24	\$2.24	\$2.25	\$2.24	\$2.23	\$2.23	\$2.23	\$2.24	\$2.23	\$2.21	\$2.20	\$2.20	\$2.12
Pulp, paper, and paperboard mills.....	2.43	2.40	2.37	2.38	2.39	2.38	2.38	2.38	2.39	2.40	2.36	2.36	2.33	2.34	2.24
Paperboard containers and boxes.....	2.16	2.16	2.15	2.14	2.14	2.14	2.11	2.11	2.12	2.14	2.12	2.10	2.10	2.10	2.01
Other paper and allied products.....	2.07	2.06	2.05	2.05	2.05	2.05	2.04	2.03	2.03	2.02	2.00	2.00	2.00	2.01	1.94
Printing, publishing, and allied industries															
Newspapers.....	2.77	2.77	2.75	2.75	2.74	2.73	2.74	2.71	2.73	2.75	2.71	2.71	2.70	2.70	2.59
Periodicals.....	3.13	3.13	3.10	3.08	3.08	3.07	3.13	3.07	3.09	3.11	3.06	3.06	3.05	3.05	2.93
Books.....	2.82	2.81	2.84	2.85	2.78	2.77	2.78	2.80	2.86	3.00	2.86	2.79	2.71	2.78	2.62
Commercial printing.....	2.34	2.31	2.28	2.28	2.27	2.29	2.28	2.28	2.30	2.30	2.30	2.29	2.30	2.28	2.20
Lithographing.....	2.69	2.68	2.67	2.68	2.65	2.64	2.64	2.62	2.63	2.65	2.61	2.61	2.60	2.60	2.48
Greeting cards.....	2.76	2.75	2.71	2.73	2.71	2.70	2.70	2.70	2.71	2.74	2.71	2.72	2.69	2.68	2.54
Bookbinding and related industries.....	1.88	1.93	1.91	1.92	1.98	1.95	1.84	1.82	1.83	1.81	1.80	1.81	1.80	1.82	1.73
Miscellaneous publishing and printing services.....	2.13	2.12	2.12	2.13	2.12	2.13	2.13	2.11	2.10	2.09	2.08	2.08	2.07	2.08	1.97
	3.08	3.06	3.06	3.08	3.07	3.07	3.03	3.02	3.01	3.04	3.00	3.04	3.01	3.01	2.68

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959								Annual average	
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958	
Average weekly earnings																
<b>Manufacturing—Continued</b>																
<i>Nondurable goods—Continued</i>																
Chemicals and allied products.....	\$105.34	\$103.58	\$104.41	\$102.01	\$101.60	\$101.60	\$102.66	\$101.75	\$101.09	\$104.48	\$100.53	\$100.28	\$100.43	\$100.02	\$94.48	
Industrial inorganic chemicals.....	115.92	114.53	117.45	113.02	112.75	112.61	114.93	113.55	113.97	117.87	111.24	111.64	111.22	111.64	104.04	
Industrial organic chemicals.....	112.94	110.77	112.29	108.62	108.21	108.21	109.78	108.58	108.05	112.89	106.45	106.86	106.91	106.81	100.04	
Drugs and medicines.....	94.13	93.73	92.75	92.97	93.66	92.62	92.66	93.11	93.11	94.39	89.06	89.28	90.17	90.58	85.88	
Soap, cleaning and polishing preparations.....	113.28	110.95	108.24	111.72	109.15	107.94	109.36	108.16	108.58	110.30	107.49	103.17	104.55	105.47	100.86	
Paints, pigments, and fillers.....	103.07	102.41	101.19	98.90	98.42	98.01	98.33	99.22	96.32	101.40	98.29	98.36	98.88	98.29	93.25	
Gum and wood chemicals.....	91.56	87.74	86.29	84.20	84.00	82.60	84.77	87.90	82.54	86.86	84.20	95.40	84.40	83.36	80.45	
Fertilizers.....	80.56	79.74	85.44	74.07	77.96	78.75	78.57	76.44	75.48	80.70	77.46	76.26	78.38	78.12	74.03	
Vegetable and animal oils and fats.....	92.42	89.42	87.23	87.96	86.29	87.30	86.48	87.23	85.84	87.32	87.00	87.03	87.20	85.44	82.21	
Miscellaneous chemicals.....	94.94	95.06	95.71	94.89	93.96	93.96	94.25	93.43	92.39	92.21	91.13	91.76	92.03	91.58	87.02	
Products of petroleum and coal.....	119.31	118.03	119.54	116.87	116.87	116.98	117.74	118.90	117.50	120.77	116.12	118.78	117.79	117.38	110.97	
Petroleum refining.....	122.51	123.11	124.23	120.20	120.60	120.40	121.80	124.01	119.80	124.53	118.50	121.80	120.39	121.29	114.90	
Coke, other petroleum and coal products.....	108.78	102.51	105.44	106.49	105.97	106.90	106.30	103.17	108.03	108.20	108.03	109.48	108.29	105.83	97.28	
Rubber products.....	103.12	100.04	94.60	97.71	100.00	102.16	101.59	97.66	101.18	102.01	105.33	107.10	98.74	101.60	92.59	
Tires and inner tubes.....	121.80	117.51	107.38	113.68	117.71	119.80	118.59	112.62	117.49	117.56	127.74	128.74	108.93	120.01	105.04	
Rubber footwear.....	82.21	81.40	77.01	78.61	77.21	79.46	80.79	79.80	79.40	79.18	79.17	78.60	81.58	79.19	76.62	
Other rubber products.....	92.57	90.12	88.43	89.78	91.76	93.52	92.93	89.87	93.38	94.73	93.21	93.40	94.98	92.99	84.59	
Average weekly hours																
Chemicals and allied products.....	41.8	41.6	42.1	41.3	41.3	41.3	41.9	41.7	41.6	42.3	41.2	41.1	41.5	41.5	40.9	
Industrial inorganic chemicals.....	42.0	41.8	42.4	41.4	41.3	41.4	42.1	41.9	41.9	42.4	41.2	41.5	41.8	41.5	40.9	
Industrial organic chemicals.....	42.3	41.8	41.9	41.3	41.3	41.3	41.9	41.6	41.4	42.6	41.1	41.1	41.6	41.4	40.5	
Drugs and medicines.....	40.4	40.4	40.5	40.6	40.9	40.8	41.0	41.2	41.2	41.4	40.3	40.4	40.8	40.8	40.7	
Soap, cleaning and polishing preparations.....	41.8	41.4	41.0	42.0	41.5	41.2	41.9	41.6	41.6	42.1	41.5	40.3	41.0	41.2	41.0	
Paints, pigments, and fillers.....	41.9	41.8	41.3	40.7	40.5	40.5	40.8	41.0	40.3	41.9	41.3	41.5	41.9	41.3	40.9	
Gum and wood chemicals.....	43.6	42.8	42.3	42.1	42.0	41.3	42.6	43.3	41.9	43.0	42.1	42.7	42.2	42.1	41.9	
Fertilizers.....	42.4	43.1	48.0	40.7	42.6	42.8	42.7	42.0	41.7	42.7	42.1	40.9	42.6	43.4	42.3	
Vegetable and animal oils and fats.....	43.8	43.2	43.4	44.2	43.8	45.0	46.0	46.4	46.4	46.2	43.5	43.3	43.6	44.5	44.2	
Miscellaneous chemicals.....	40.4	40.8	40.9	40.9	40.5	40.5	40.8	40.8	40.7	40.8	40.5	40.6	40.9	40.7	40.1	
Products of petroleum and coal.....	41.0	40.7	40.8	40.3	40.3	40.2	40.6	41.0	40.8	41.5	40.6	41.1	40.9	40.9	40.5	
Petroleum refining.....	40.7	40.9	41.0	40.2	40.2	40.0	40.6	41.2	40.2	41.1	39.9	40.6	40.4	40.7	40.6	
Coke, other petroleum and coal products.....	42.0	40.2	40.4	40.8	40.6	40.8	40.5	40.3	42.7	42.6	42.7	42.6	42.3	41.5	40.2	
Rubber products.....	40.6	39.7	38.3	39.4	40.0	40.7	40.8	39.7	40.8	41.3	42.3	42.5	40.3	41.3	39.4	
Tires and inner tubes.....	40.6	39.7	36.9	38.8	39.5	40.2	40.2	38.7	40.1	40.4	43.3	43.2	36.4	41.1	38.7	
Rubber footwear.....	40.3	40.1	35.7	39.5	38.8	39.5	39.8	39.9	39.9	40.4	40.6	40.1	41.2	40.2	39.7	
Other rubber products.....	40.6	39.7	39.3	39.9	40.6	41.2	41.3	40.3	41.5	42.1	41.8	42.4	42.4	41.7	39.9	
Average hourly earnings																
Chemicals and allied products.....	\$2.52	\$2.49	\$2.48	\$2.47	\$2.46	\$2.46	\$2.45	\$2.44	\$2.43	\$2.47	\$2.44	\$2.44	\$2.42	\$2.41	\$2.31	
Industrial inorganic chemicals.....	2.76	2.74	2.77	2.73	2.73	2.72	2.73	2.71	2.72	2.78	2.70	2.69	2.68	2.69	2.56	
Industrial organic chemicals.....	2.67	2.65	2.68	2.63	2.62	2.62	2.62	2.61	2.61	2.65	2.59	2.60	2.57	2.58	2.47	
Drugs and medicines.....	2.33	2.32	2.29	2.29	2.29	2.27	2.26	2.26	2.26	2.28	2.21	2.21	2.21	2.22	2.11	
Soap, cleaning and polishing preparations.....	2.71	2.68	2.64	2.66	2.63	2.62	2.61	2.60	2.61	2.62	2.59	2.56	2.55	2.56	2.46	
Paints, pigments, and fillers.....	2.46	2.45	2.45	2.43	2.43	2.42	2.41	2.42	2.39	2.42	2.38	2.37	2.36	2.38	2.28	
Gum and wood chemicals.....	2.10	2.05	2.04	2.00	2.00	2.00	1.99	2.03	1.97	2.02	2.00	2.00	2.00	1.98	1.92	
Fertilizers.....	1.90	1.85	1.78	1.82	1.83	1.84	1.84	1.82	1.81	1.89	1.84	1.84	1.84	1.80	1.75	
Vegetable and animal oils and fats.....	2.11	2.07	2.01	1.99	1.97	1.94	1.88	1.88	1.85	1.89	2.00	2.01	2.00	1.92	1.86	
Miscellaneous chemicals.....	2.35	2.33	2.34	2.32	2.32	2.32	2.31	2.29	2.27	2.26	2.25	2.26	2.25	2.25	2.17	
Products of petroleum and coal.....	2.91	2.90	2.93	2.90	2.90	2.91	2.90	2.90	2.88	2.91	2.86	2.89	2.88	2.87	2.74	
Petroleum refining.....	3.01	3.01	3.03	2.99	3.00	3.01	3.00	3.01	2.98	3.03	2.97	3.00	2.98	2.98	2.83	
Coke, other petroleum and coal products.....	2.59	2.55	2.61	2.61	2.61	2.62	2.60	2.56	2.53	2.54	2.53	2.57	2.56	2.55	2.42	
Rubber products.....	2.54	2.52	2.47	2.48	2.50	2.51	2.49	2.46	2.48	2.47	2.49	2.52	2.45	2.46	2.35	
Tires and inner tubes.....	3.00	2.96	2.91	2.93	2.98	2.98	2.95	2.91	2.93	2.91	2.95	2.98	2.96	2.92	2.74	
Rubber footwear.....	2.03	2.03	1.99	1.99	1.99	2.01	2.03	2.00	1.99	1.96	1.95	1.96	1.96	1.97	1.93	
Other rubber products.....	2.28	2.27	2.25	2.25	2.26	2.27	2.25	2.23	2.25	2.25	2.23	2.25	2.24	2.23	2.12	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959						Annual average		
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
Average weekly earnings															
Manufacturing—Continued															
Nondurable goods—Continued															
Leather and leather products.....	\$62.37	\$59.90	\$58.06	\$60.84	\$60.64	\$61.78	\$61.07	\$60.43	\$58.28	\$59.09	\$60.48	\$60.90	\$61.50	\$60.70	\$57.78
Leather: tanned, curried, and finished.....	86.05	83.07	81.66	81.87	81.24	81.30	82.74	81.09	80.50	80.11	80.82	79.70	80.94	80.94	78.39
Industrial leather belting and packing.....	77.81	77.03	73.53	76.24	72.13	74.68	79.80	69.80	72.38	77.42	80.19	79.58	83.38	79.56	76.62
Boot and shoe cut stock and findings.....	59.66	58.25	55.22	57.82	58.44	60.30	59.83	56.21	54.42	55.55	57.30	58.05	58.74	57.30	56.02
Footwear (except rubber).....	59.84	56.80	55.52	58.56	58.67	60.10	58.40	57.46	55.69	56.47	58.50	59.21	59.44	58.34	54.87
Luggage.....	66.70	65.07	62.87	63.63	62.29	62.87	63.54	69.70	63.50	64.19	64.85	65.11	65.63	65.18	63.46
Handbags and small leather goods.....	57.38	57.07	53.61	58.05	57.30	56.92	58.65	59.60	54.24	56.24	56.74	56.60	54.54	56.45	55.54
Gloves and miscellaneous leather goods.....	54.39	52.71	51.41	52.20	52.42	50.98	53.11	53.71	52.77	51.41	52.88	51.61	51.66	51.80	50.40
Transportation and public utilities:															
Transportation:															
Interstate railroads.....		107.59	107.33	109.82	111.45	106.60	110.00	106.86	105.28	106.17	103.38	107.25	108.28	106.43	101.50
Class I railroads <sup>2</sup> .....		107.59	107.33	109.82	111.45	106.60	110.00	106.86	105.28	106.17	103.38	107.25	108.28	106.43	101.50
Local railroads and buslines.....	99.99	99.79	97.78	97.78	97.33	95.60	96.10	95.44	94.57	94.33	95.68	95.47	95.92	94.59	90.52
Communication:															
Telephone.....	88.09	87.81	86.36	87.88	87.42	86.14	87.42	89.95	88.58	89.22	88.85	89.29	85.02	85.46	78.72
Telegraph.....	104.00	97.75	95.30	95.30	94.43	95.30	96.53	95.53	95.57	100.11	97.13	95.79	96.64	95.99	90.06
Other public utilities:															
Gas and electric utilities.....	109.20	109.34	108.94	108.26	107.59	108.39	107.98	109.03	108.62	107.79	105.93	106.04	105.37	105.78	100.37
Electric light and power utilities.....	109.20	109.61	108.79	108.94	107.80	108.39	107.71	108.65	108.24	108.36	107.16	107.53	106.60	106.34	101.43
Gas utilities.....	101.84	101.15	101.25	100.85	99.85	100.85	101.18	103.91	103.17	102.34	99.06	98.74	98.49	99.39	94.83
Electric light and gas utilities combined.....	115.34	116.18	115.62	113.96	114.52	114.67	114.12	114.13	113.44	112.06	110.00	110.42	110.54	110.56	103.63
Average weekly hours															
Leather and leather products.....	37.8	36.3	35.4	37.1	37.2	37.9	37.7	37.3	36.2	36.7	37.8	38.3	38.2	37.7	36.8
Leather: tanned, curried, and finished.....	40.4	39.0	38.7	38.8	38.5	38.9	39.4	38.8	38.7	38.7	38.9	38.5	39.1	39.1	39.0
Industrial leather belting and packing.....	39.3	39.1	38.1	38.7	36.5	38.1	40.1	36.2	37.5	39.5	40.5	40.8	41.9	40.8	39.7
Boot and shoe cut stock and findings.....	38.0	37.1	35.4	37.3	37.7	38.9	38.6	36.5	35.8	36.5	37.7	38.7	38.9	37.7	37.1
Footwear (except rubber).....	37.4	35.5	34.7	36.6	36.9	37.8	37.2	36.6	35.7	36.2	37.5	38.2	38.1	37.4	36.1
Luggage.....	39.7	38.5	37.2	38.1	37.8	37.2	37.6	41.0	37.8	38.9	39.5	39.7	39.3	38.8	38.0
Handbags and small leather goods.....	37.5	37.3	35.5	38.7	38.2	38.2	39.1	40.0	36.4	38.0	38.6	38.5	37.1	38.4	38.3
Gloves and miscellaneous leather goods.....	37.0	36.1	35.7	36.0	36.4	35.9	37.4	37.3	36.9	35.7	37.5	36.6	36.9	36.8	36.0
Transportation and public utilities:															
Transportation:															
Interstate railroads.....		41.7	41.6	42.9	42.7	41.0	42.8	41.1	41.6	41.8	40.7	42.6	42.8	41.9	41.6
Class I railroads <sup>2</sup> .....		41.7	41.6	42.9	42.7	41.0	42.8	41.1	41.6	41.8	40.7	42.6	42.8	41.9	41.6
Local railroads and buslines.....	43.1	43.2	42.7	42.7	42.5	42.3	42.9	42.8	42.6	42.3	43.1	43.2	43.6	42.8	42.7
Communication:															
Telephone.....	39.5	39.2	38.9	39.1	39.2	38.8	39.2	40.7	39.9	40.6	39.2	39.4	39.0	39.2	38.4
Telegraph.....	42.8	42.5	41.8	41.8	41.6	41.8	41.9	41.9	42.1	44.1	42.6	42.2	42.2	42.1	41.5
Other public utilities:															
Gas and electric utilities.....	40.9	40.8	40.8	40.7	40.6	40.9	40.9	41.3	41.3	41.3	40.9	41.1	41.0	41.0	40.8
Electric light and power utilities.....	40.9	40.9	40.9	40.8	40.7	40.9	40.8	41.0	41.0	41.2	40.9	41.2	41.0	40.9	40.9
Gas utilities.....	40.9	40.3	40.5	40.5	40.1	40.5	40.8	41.4	41.6	41.6	40.6	40.8	40.7	40.9	40.7
Electric light and gas utilities combined.....	40.9	41.2	41.0	40.7	40.9	41.1	41.2	41.5	41.4	41.2	41.2	41.2	41.4	41.1	40.8
Average hourly earnings															
Leather and leather products.....	\$1.65	\$1.65	\$1.64	\$1.64	\$1.63	\$1.63	\$1.62	\$1.62	\$1.61	\$1.61	\$1.60	\$1.59	\$1.61	\$1.61	\$1.57
Leather: tanned, curried, and finished.....	2.13	2.13	2.11	2.11	2.11	2.09	2.10	2.09	2.08	2.07	2.07	2.07	2.07	2.07	2.01
Industrial leather belting and packing.....	1.98	1.97	1.93	1.97	1.96	1.96	1.99	1.92	1.93	1.96	1.98	1.95	1.99	1.95	1.93
Boot and shoe cut stock and findings.....	1.57	1.57	1.56	1.55	1.55	1.55	1.55	1.54	1.52	1.53	1.52	1.50	1.51	1.52	1.51
Footwear (except rubber).....	1.60	1.60	1.60	1.60	1.59	1.59	1.57	1.57	1.56	1.56	1.56	1.55	1.56	1.56	1.52
Luggage.....	1.68	1.69	1.69	1.67	1.67	1.69	1.69	1.70	1.68	1.65	1.65	1.64	1.67	1.68	1.67
Handbags and small leather goods.....	1.53	1.53	1.51	1.50	1.50	1.49	1.50	1.49	1.49	1.48	1.47	1.47	1.47	1.47	1.45
Gloves and miscellaneous leather goods.....	1.47	1.46	1.44	1.45	1.44	1.42	1.42	1.44	1.43	1.44	1.41	1.41	1.40	1.41	1.40
Transportation and public utilities:															
Transportation:															
Interstate railroads.....		2.58	2.58	2.56	2.61	2.60	2.57	2.60	2.53	2.54	2.54	2.52	2.53	2.54	2.44
Class I railroads <sup>2</sup> .....		2.58	2.58	2.56	2.61	2.60	2.57	2.60	2.53	2.54	2.54	2.52	2.53	2.54	2.44
Local railroads and buslines.....	2.32	2.31	2.29	2.29	2.29	2.26	2.24	2.23	2.22	2.23	2.22	2.21	2.20	2.21	2.12
Communication:															
Telephone.....	2.23	2.24	2.22	2.24	2.23	2.22	2.23	2.21	2.22	2.20	2.19	2.19	2.18	2.18	2.05
Telegraph.....	2.43	2.30	2.28	2.28	2.27	2.28	2.28	2.28	2.27	2.27	2.28	2.27	2.28	2.28	2.17
Other public utilities:															
Gas and electric utilities.....	2.67	2.68	2.67	2.66	2.65	2.65	2.64	2.64	2.63	2.61	2.59	2.58	2.57	2.58	2.46
Electric light and power utilities.....	2.67	2.68	2.66	2.67	2.65	2.65	2.64	2.65	2.64	2.63	2.62	2.61	2.60	2.60	2.48
Gas utilities.....	2.49	2.51	2.50	2.49	2.49	2.49	2.48	2.51	2.48	2.46	2.44	2.42	2.42	2.43	2.33
Electric light and gas utilities combined.....	2.82	2.82	2.82	2.80	2.80	2.79	2.77	2.75	2.74	2.72	2.67	2.68	2.67	2.69	2.54

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Industry	1960						1959						Annual average		
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
	Average weekly earnings														
<b>Wholesale and retail trade:</b>															
Wholesale trade	\$92.69	\$92.46	\$91.83	\$91.37	\$90.35	\$90.80	\$91.94	\$91.71	\$91.53	\$91.94	\$91.53	\$91.76	\$91.13	\$90.27	\$87.02
Retail trade (except eating and drinking places)	68.80	67.69	67.48	66.95	66.95	66.95	66.09	66.38	67.11	67.82	68.32	68.68	67.79	67.06	64.77
General merchandise stores	49.74	48.87	48.90	48.33	48.19	48.19	50.01	47.46	47.94	48.50	49.42	49.07	48.72	48.37	46.85
Department stores and general mail-order houses	56.35	55.04	55.14	53.69	53.69	54.19	56.70	52.98	53.82	54.60	55.03	54.82	54.72	54.36	52.60
Food and liquor stores	71.96	70.60	70.13	69.89	69.34	69.38	69.26	69.81	69.65	71.20	71.23	72.18	70.29	69.89	67.82
Automotive and accessories dealers	91.73	90.87	91.73	88.91	87.40	88.04	86.29	88.71	89.78	87.40	89.12	90.20	90.41	88.24	83.22
Apparel and accessories stores	82.82	81.56	83.48	80.85	81.64	81.87	83.35	81.83	81.34	82.29	82.54	82.65	82.55	81.90	80.81
Other retail trade:															
Furniture and appliance stores	76.80	75.07	75.44	74.80	75.44	76.67	79.80	77.46	78.18	77.42	77.79	77.18	78.95	78.78	72.31
Lumber and hardware supply stores	82.88	82.49	81.64	79.49	78.28	78.09	79.99	80.22	81.79	80.79	81.94	81.70	80.70	79.95	77.04
<b>Finance, insurance, and real estate:</b>															
Banks and trust companies <sup>2</sup>	69.56	69.75	69.94	69.56	69.94	69.93	68.81	68.26	68.81	68.26	68.07	68.06	67.69	68.07	66.57
Security dealers and exchanges	114.74	111.54	113.61	112.67	114.82	115.49	117.14	110.15	109.43	107.22	114.94	120.43	123.72	119.24	106.88
Insurance carriers	88.23	88.15	87.37	87.68	87.54	87.26	86.82	86.32	85.79	85.98	86.89	86.57	85.91	85.79	82.97
<b>Service and miscellaneous:</b>															
Hotels and lodging places:															
Hotels, year-round <sup>3</sup>	48.28	48.28	47.52	48.00	47.64	48.12	48.40	48.24	48.20	48.36	47.91	47.44	47.32	47.44	45.20
Personal services:															
Laundries	48.80	48.68	48.00	46.68	46.92	47.04	47.24	46.37	46.96	46.96	46.33	46.22	46.92	46.45	44.30
Cleaning and dyeing plants	57.06	55.96	57.94	52.08	52.40	53.10	54.91	54.35	55.00	53.54	51.65	51.92	54.79	53.29	50.82
Motion pictures:															
Motion-picture production and distribution	112.11	113.37	107.96	107.23	112.13	111.63	112.89	114.31	114.51	110.97	114.98	108.26	103.15	108.36	98.65
<b>Wholesale and retail trade:</b>															
Wholesale trade	40.3	40.2	40.1	39.9	39.8	40.0	40.5	40.4	40.5	40.5	40.5	40.6	40.5	40.3	40.1
Retail trade (except eating and drinking places)	37.8	37.4	37.7	37.4	37.4	37.4	38.2	37.5	37.7	38.1	38.6	38.8	38.3	38.1	38.1
General merchandise stores	34.3	33.7	34.5	33.8	33.7	33.7	36.5	33.9	34.0	34.4	35.3	35.3	34.8	34.8	34.7
Department stores and general mail-order houses	35.0	34.4	34.9	34.2	34.2	34.3	37.3	34.4	34.5	35.0	35.5	35.6	35.3	35.3	35.3
Food and liquor stores	35.8	35.3	35.6	35.3	35.2	35.4	35.7	35.8	35.9	36.7	37.1	37.4	36.8	36.4	36.3
Automotive and accessories dealers	44.1	43.9	44.1	43.8	43.7	43.8	43.8	43.7	44.0	43.7	43.9	44.0	44.1	43.9	43.8
Apparel and accessories stores	34.3	33.7	34.5	33.9	34.2	33.9	35.1	34.1	34.0	34.4	35.5	35.1	34.8	34.6	34.8
Other retail trade:															
Furniture and appliance stores	40.9	40.8	41.0	41.1	41.0	41.0	42.0	41.2	41.4	41.4	41.6	41.7	41.5	41.4	41.8
Lumber and hardware supply stores	42.5	42.3	42.3	41.4	41.2	41.1	42.1	42.0	42.6	42.3	42.9	43.0	42.7	42.3	42.1
<b>Finance, insurance, and real estate:</b>															
Banks and trust companies <sup>2</sup>	37.4	37.3	37.4	37.4	37.4	37.8	37.6	37.3	37.6	37.3	37.4	37.6	37.4	37.4	37.4
Security dealers and exchanges															
Insurance carriers															
<b>Service and miscellaneous:</b>															
Hotels and lodging places:															
Hotels, year-round <sup>3</sup>	39.9	39.9	39.6	40.0	39.7	40.1	40.0	40.2	40.5	40.3	40.6	40.2	40.1	40.2	40.0
Personal services:															
Laundries	40.0	39.9	40.0	38.9	39.1	39.2	39.7	39.3	39.8	39.8	39.6	39.5	40.1	39.7	39.2
Cleaning and dyeing plants	39.9	39.4	40.8	37.9	37.7	38.2	39.5	39.1	40.0	38.8	37.7	37.9	39.7	38.9	38.8
Motion pictures:															
Motion-picture production and distribution															
<b>Wholesale and retail trade:</b>															
Wholesale trade	\$2.30	\$2.30	\$2.29	\$2.29	\$2.27	\$2.27	\$2.27	\$2.27	\$2.26	\$2.27	\$2.26	\$2.26	\$2.25	\$2.24	\$2.17
Retail trade (except eating and drinking places)	1.82	1.81	1.79	1.79	1.79	1.79	1.78	1.77	1.78	1.78	1.77	1.77	1.77	1.76	1.70
General merchandise stores	1.45	1.45	1.42	1.43	1.43	1.43	1.37	1.40	1.41	1.41	1.40	1.39	1.40	1.39	1.35
Department stores and general mail-order houses	1.61	1.60	1.58	1.57	1.57	1.58	1.82	1.54	1.56	1.56	1.55	1.54	1.55	1.54	1.49
Food and liquor stores	2.01	2.00	1.97	1.98	1.97	1.96	1.94	1.95	1.94	1.94	1.92	1.93	1.91	1.92	1.86
Automotive and accessories dealers	2.08	2.07	2.08	2.03	2.00	2.01	1.97	2.05	2.04	2.00	2.03	2.05	2.05	2.01	1.90
Apparel and accessories stores	1.54	1.53	1.55	1.50	1.51	1.53	1.82	1.82	1.81	1.82	1.48	1.50	1.51	1.50	1.46
Other retail trade:															
Furniture and appliance stores	1.88	1.84	1.84	1.82	1.84	1.87	1.90	1.88	1.84	1.87	1.87	1.85	1.83	1.83	1.73
Lumber and hardware supply stores	1.95	1.95	1.93	1.92	1.90	1.90	1.90	1.91	1.92	1.91	1.91	1.90	1.89	1.89	1.83
<b>Finance, insurance, and real estate:</b>															
Banks and trust companies <sup>2</sup>	1.86	1.87	1.87	1.86	1.87	1.85	1.83	1.83	1.83	1.83	1.82	1.81	1.81	1.82	1.78
Security dealers and exchanges															
Insurance carriers															
<b>Service and miscellaneous:</b>															
Hotels and lodging places:															
Hotels, year-round <sup>3</sup>	1.21	1.21	1.20	1.20	1.20	1.20	1.21	1.20	1.19	1.20	1.18	1.18	1.18	1.18	1.13
Personal services:															
Laundries	1.22	1.22	1.20	1.20	1.20	1.20	1.19	1.18	1.18	1.18	1.17	1.17	1.17	1.17	1.13
Cleaning and dyeing plants	1.43	1.42	1.42	1.39	1.39	1.39	1.39	1.39	1.39	1.38	1.37	1.37	1.38	1.37	1.32
Motion pictures:															
Motion-picture production and distribution															

<sup>1</sup> For comparability of data with those published in issues prior to August 1958 and coverage of these series, see footnote 1, table A-2.

In addition, hours and earnings data for anthracite mining have been revised from January 1953 and are not comparable with those published in issues prior to August 1958.

For mining, manufacturing, laundries, and cleaning and dyeing plants, data refer to production and related workers; for contract construction, to construction workers; and for the remaining industries, unless otherwise noted, to nonsupervisory workers and working supervisors.

<sup>2</sup> Preliminary.

<sup>3</sup> Figures for Class I railroads (excluding switching and terminal companies) are based upon monthly data summarized in the M-300 report by the Interstate Commerce Commission and relate to all employees who received pay during the month, except executives, officials, and staff assistants (ICC Group I).

<sup>4</sup> Data relate to domestic nonsupervisory employees except messengers.

<sup>5</sup> Average weekly earnings have been revised beginning with January 1958 and are not strictly comparable with data for earlier years. Average weekly hours and average hourly earnings are new series, available from January 1958.

<sup>6</sup> Money payments only; additional value of board, room, uniforms, and tips not included.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics for all series except that for Class I railroads (see footnote 3).



TABLE C-2. Average overtime hours and average hourly earnings excluding overtime of production workers in manufacturing, by major industry group<sup>1</sup>

Major industry group	1960						1959						Annual average		
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
	Average overtime hours <sup>2</sup>														
Manufacturing.....	2.4	2.4	2.1	2.5	2.6	2.8	2.7	2.6	2.8	3.0	2.9	2.7	2.9	2.7	2.0
Durable goods.....	2.3	2.4	2.1	2.5	2.7	2.9	2.7	2.5	2.8	3.0	3.0	2.7	3.0	2.7	1.9
Ordinance and accessories.....	1.9	1.9	1.6	2.0	2.3	2.1	2.2	2.1	2.1	2.3	2.1	2.1	2.2	2.1	2.0
Lumber and wood products.....	3.3	3.2	2.9	2.8	2.8	2.9	3.0	3.2	3.5	3.6	4.1	3.5	3.7	3.4	2.9
Furniture and fixtures.....	2.4	2.4	2.4	2.4	2.6	2.7	3.5	3.2	3.5	3.2	3.3	2.8	2.7	2.9	2.1
Stone, clay, and glass products.....	3.0	3.1	2.8	2.7	2.8	2.9	3.0	3.2	3.4	3.6	3.9	3.5	3.6	3.4	2.8
Primary metal industries.....	1.5	1.5	2.0	2.1	2.4	2.8	2.6	2.3	2.6	3.0	2.6	2.4	3.1	2.6	1.3
Fabricated metal products.....	2.6	2.6	2.1	2.5	2.7	3.2	3.0	2.3	2.9	3.6	3.4	3.0	3.3	2.9	2.1
Machinery (except electrical).....	2.6	2.7	2.4	2.8	2.9	2.8	2.9	2.5	2.7	2.8	2.8	2.9	3.2	2.7	1.7
Electrical machinery.....	1.9	1.7	1.2	1.9	2.0	2.4	2.4	2.2	2.5	2.6	2.4	2.1	2.3	2.2	1.5
Transportation equipment.....	2.2	2.6	1.9	2.8	3.2	3.8	2.5	1.9	2.5	2.7	2.7	2.6	2.8	2.5	1.9
Instruments and related products.....	2.0	2.0	1.7	2.3	2.3	2.2	2.7	2.6	2.5	2.4	2.3	2.4	2.2	2.3	1.5
Miscellaneous manufacturing.....	2.2	2.2	1.9	2.4	2.5	2.4	2.7	2.7	3.1	3.0	2.7	2.4	2.7	2.6	2.1
Nondurable goods.....	2.6	2.5	2.2	2.4	2.5	2.6	2.7	2.7	2.8	3.0	2.9	2.8	2.7	2.7	2.3
Food and kindred products.....	3.2	3.1	2.8	2.9	2.8	3.3	3.4	3.6	3.6	4.0	3.3	3.4	3.4	3.3	3.0
Tobacco manufactures.....	1.2	1.0	.7	.5	.6	1.3	1.1	1.0	1.3	1.6	1.7	1.8	1.5	1.2	1.3
Textile-mill products.....	2.9	2.9	2.5	3.0	3.0	3.0	3.2	3.2	3.2	3.1	3.3	3.1	3.3	3.1	2.1
Apparel and other finished textile products.....	1.4	1.3	1.0	1.4	1.4	1.3	1.4	1.6	1.5	1.5	1.7	1.4	1.4	1.4	1.1
Paper and allied products.....	4.2	4.3	3.7	4.1	4.2	4.3	4.3	4.5	4.6	5.1	4.9	4.7	4.6	4.6	3.9
Printing and publishing.....	2.8	3.0	2.6	3.0	2.8	2.9	3.6	3.1	3.2	3.6	3.2	2.9	2.8	3.0	2.5
Chemicals and allied products.....	2.5	2.5	2.9	2.3	2.4	2.3	2.4	2.4	2.5	3.1	2.5	2.4	2.4	2.5	2.0
Products of petroleum and coal.....	1.9	1.6	1.7	1.4	1.5	1.6	1.5	1.8	2.1	2.3	2.0	2.3	1.7	1.8	1.5
Rubber products.....	2.6	2.2	1.7	2.3	2.8	3.1	2.8	2.5	3.5	4.3	4.6	4.8	3.9	3.7	2.3
Leather and leather products.....	1.3	1.0	.8	1.4	1.4	1.4	1.4	1.4	1.2	1.2	1.3	1.3	1.3	1.4	1.1
Average hourly earnings excluding overtime <sup>3</sup>															
Manufacturing.....	\$2.22	\$2.22	\$2.22	\$2.22	\$2.21	\$2.21	\$2.20	\$2.16	\$2.14	\$2.14	\$2.12	\$2.16	\$2.16	\$2.16	\$2.08
Durable goods.....	2.38	2.37	2.38	2.38	2.37	2.37	2.35	2.31	2.28	2.28	2.27	2.31	2.32	2.30	2.23
Ordinance and accessories.....	2.57	2.55	2.56	2.56	2.55	2.55	2.54	2.53	2.52	2.49	2.48	2.49	2.49	2.49	2.42
Lumber and wood products.....	1.98	1.95	1.94	1.93	1.91	1.89	1.92	1.94	1.94	1.94	1.91	1.89	1.90	1.89	1.83
Furniture and fixtures.....	1.81	1.80	1.80	1.81	1.79	1.79	1.78	1.76	1.76	1.76	1.77	1.78	1.78	1.76	1.72
Stone, clay, and glass products.....	2.19	2.19	2.19	2.20	2.18	2.18	2.17	2.16	2.14	2.14	2.12	2.13	2.12	2.13	2.04
Primary metal industries.....	2.77	2.77	2.78	2.77	2.77	2.78	2.77	2.70	2.57	2.56	2.55	2.73	2.74	2.70	2.61
Fabricated metal products.....	2.38	2.37	2.36	2.35	2.35	2.35	2.33	2.29	2.28	2.29	2.28	2.29	2.29	2.29	2.21
Machinery (except electrical).....	2.49	2.49	2.47	2.47	2.47	2.46	2.46	2.45	2.44	2.43	2.41	2.41	2.41	2.42	2.33
Electrical machinery.....	2.23	2.24	2.24	2.23	2.23	2.22	2.20	2.18	2.17	2.16	2.15	2.17	2.16	2.16	2.11
Transportation equipment.....	2.67	2.64	2.64	2.64	2.64	2.64	2.64	2.60	2.62	2.62	2.60	2.57	2.57	2.58	2.47
Instruments and related products.....	2.29	2.29	2.28	2.28	2.27	2.26	2.25	2.24	2.23	2.22	2.22	2.22	2.23	2.22	2.15
Miscellaneous manufacturing.....	1.88	1.89	1.89	1.88	1.89	1.89	1.88	1.84	1.83	1.83	1.84	1.84	1.84	1.84	1.80
Nondurable goods.....	2.01	2.01	2.01	2.00	1.99	1.98	1.97	1.96	1.95	1.95	1.93	1.95	1.94	1.94	1.89
Food and kindred products.....	2.10	2.11	2.12	2.11	2.10	2.10	2.08	2.05	2.02	1.99	1.97	2.00	2.01	2.02	1.94
Tobacco manufactures.....	1.79	1.78	1.78	1.71	1.69	1.69	1.68	1.67	1.66	1.62	1.59	1.72	1.70	1.64	1.57
Textile-mill products.....	1.58	1.57	1.56	1.56	1.54	1.54	1.53	1.53	1.53	1.53	1.52	1.52	1.52	1.52	1.47
Apparel and other finished textile products.....	1.51	1.51	1.50	1.53	1.52	1.51	1.50	1.50	1.49	1.50	1.48	1.48	1.48	1.49	1.49
Paper and allied products.....	2.17	2.15	2.14	2.14	2.14	2.14	2.12	2.12	2.12	2.12	2.10	2.10	2.08	2.09	2.02
Printing and publishing.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Chemicals and allied products.....	2.45	2.42	2.40	2.40	2.40	2.39	2.39	2.37	2.36	2.39	2.36	2.37	2.35	2.34	2.26
Products of petroleum and coal.....	2.84	2.84	2.87	2.85	2.85	2.86	2.85	2.84	2.80	2.83	2.79	2.82	2.82	2.81	2.69
Rubber products.....	2.46	2.45	2.42	2.41	2.41	2.42	2.41	2.39	2.38	2.35	2.36	2.38	2.34	2.36	2.28
Leather and leather products.....	1.62	1.63	1.62	1.61	1.60	1.60	1.59	1.59	1.58	1.58	1.58	1.57	1.58	1.58	1.55

<sup>1</sup> For comparability of data with those published in issues prior to August 1958, see footnote 1, table A-2

<sup>2</sup> Preliminary.

<sup>3</sup> Covers premium overtime hours of production and related workers during the pay period ending nearest the 15th of the month. Overtime hours are those for which premiums were paid because the hours were in excess of the number of hours of either the straight-time workday or workweek. Weekend and holiday hours are included only if premium wage rates were paid. Hours

for which only shift differential, hazard, incentive, or other similar types of premiums were paid are excluded. These data are not available prior to 1956.

<sup>4</sup> Derived by assuming that overtime hours are paid at the rate of time and one-half.

<sup>5</sup> Not available as average overtime rates are significantly above time and one-half. Inclusion of data for the group in the nondurable-goods total has little effect.

TABLE C-3. Indexes of aggregate weekly man-hours and payrolls in industrial and construction activities<sup>1</sup>

[1947-49-100]																	
Activity	1960											1959				Annual average	
	July <sup>2</sup>	June <sup>2</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958		
	Man-hours																
Total.....	101.5	102.3	100.8	98.4	97.4	98.4	99.5	102.4	100.1	101.4	103.0	103.2	104.0	100.7	94.3		
Mining.....	62.8	66.2	66.2	66.5	64.9	63.8	64.0	67.3	64.1	60.0	59.2	61.7	66.9	65.4	67.9		
Contract construction.....	144.2	135.9	126.3	114.3	94.9	98.5	101.6	118.9	123.3	133.7	136.5	146.1	140.1	123.4	118.2		
Manufacturing.....	98.0	99.9	99.4	98.3	99.9	100.8	101.6	102.4	99.2	99.5	101.1	99.8	101.3	99.8	92.6		
Durable goods.....	102.7	106.1	106.5	105.8	108.1	109.3	110.3	109.8	103.4	103.3	103.9	101.6	108.0	105.6	98.9		
Ordnance and accessories.....	268.1	318.8	326.3	325.9	336.4	332.3	332.1	334.7	325.9	328.0	326.9	313.2	322.0	325.3	303.0		
Lumber and wood products.....	79.4	82.2	77.7	74.2	70.6	72.4	72.2	76.9	78.7	81.7	82.5	84.6	83.2	78.4	72.7		
Furniture and fixtures.....	106.1	108.5	107.5	108.0	108.7	109.2	109.3	113.5	111.4	113.8	112.4	111.7	108.0	108.7	97.2		
Stone, clay and glass products.....	104.9	105.6	104.6	102.4	100.1	101.3	101.2	105.0	105.4	106.9	108.9	110.3	108.9	104.6	94.7		
Primary metal industries.....	89.2	92.6	95.2	99.0	103.1	104.3	106.1	105.2	93.1	99.1	90.2	61.4	98.4	91.1	83.7		
Fabricated metal products.....	105.9	109.1	108.5	106.2	109.8	111.3	112.3	110.6	101.9	105.9	111.6	107.9	110.5	108.7	101.1		
Machinery (except electrical).....	99.6	102.7	103.3	103.5	105.4	105.3	105.1	104.8	100.0	102.0	103.5	100.9	102.5	101.0	88.9		
Electrical machinery.....	130.9	134.2	133.1	131.7	137.3	138.4	141.5	142.7	139.3	142.0	141.0	134.2	130.7	132.6	118.9		
Transportation equipment.....	109.6	114.0	119.8	117.7	123.8	127.0	130.1	119.2	109.5	122.4	119.9	113.6	123.1	120.4	111.6		
Instruments and related products.....	117.0	118.9	118.8	118.7	121.0	119.8	120.6	123.5	122.4	122.8	121.7	118.3	116.9	117.1	105.4		
Miscellaneous manufacturing.....	100.6	104.7	102.9	100.5	102.4	100.3	98.5	103.5	108.7	111.0	109.4	108.1	98.6	101.1	92.7		
Nondurable goods.....	92.3	92.5	90.9	89.4	90.1	90.5	91.2	93.6	94.2	95.0	97.7	97.7	93.2	93.0	88.7		
Food and kindred products.....	87.5	82.3	78.5	76.4	74.1	74.4	77.5	81.4	84.7	88.1	96.2	97.3	86.9	83.7	84.2		
Tobacco manufactures.....	64.9	66.5	64.5	61.8	61.6	68.4	74.6	70.6	77.9	92.6	100.0	90.6	67.0	77.1	77.7		
Textile-mill products.....	70.8	73.5	72.9	71.8	71.7	72.5	72.9	74.6	74.8	75.6	74.5	76.1	74.2	74.4	69.2		
Apparel and other finished textile products.....	102.4	104.9	104.2	100.9	106.4	107.1	104.6	107.0	108.0	105.9	107.0	109.7	102.6	105.1	98.8		
Paper and allied products.....	110.0	112.5	112.0	110.2	110.3	110.2	111.6	112.9	113.0	114.2	115.6	115.0	113.5	112.7	108.0		
Printing and publishing.....	114.2	114.9	115.0	113.4	114.7	113.4	113.7	117.5	115.3	115.7	116.8	112.9	111.4	112.8	109.0		
Chemicals and allied products.....	106.8	107.2	107.8	109.8	105.7	105.2	104.9	106.5	106.5	106.3	108.3	103.7	102.5	104.3	99.2		
Products of petroleum and coal.....	84.4	84.5	83.6	83.6	82.4	82.7	82.1	83.1	83.4	81.3	84.0	81.0	80.1	84.1	84.2		
Rubber products.....	99.1	101.1	98.7	96.6	102.9	104.9	106.3	106.5	104.2	108.9	110.2	108.3	108.6	103.5	92.0		
Leather and leather products.....	89.9	90.1	84.2	82.6	89.7	90.2	91.9	92.1	91.0	88.4	90.8	94.6	94.5	92.2	86.0		
Payrolls																	
Mining.....	107.5	107.8	108.7	106.5	104.4	105.4	110.5	104.4	95.9	94.3	98.4	106.5	105.0	104.9			
Contract construction.....	247.5	230.5	207.9	176.1	180.2	185.4	214.8	221.8	239.1	242.9	257.7	244.4	216.9	200.5			
Manufacturing.....	169.2	172.5	171.5	168.8	172.6	173.9	175.5	175.4	166.8	165.9	169.1	164.9	170.2	167.2	148.7		

<sup>1</sup> For comparability of data with those published in issues prior to August 1958, see footnote 1, table A-2.

For mining and manufacturing, data refer to production and related workers; for contract construction, to construction workers.

<sup>2</sup> Preliminary.

TABLE C-4. Gross and spendable average weekly earnings of production workers in manufacturing, in current and 1947-49 dollars<sup>1</sup>

Item	1960						1959							Annual average	
	June <sup>1</sup>	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	1959	1958
<i>Manufacturing</i>															
Gross average weekly earnings:															
Current dollars.....	\$91.60	\$91.37	\$89.60	\$90.91	\$91.14	\$92.29	\$92.16	\$88.98	\$86.06	\$89.47	\$88.70	\$89.65	\$91.17	\$89.47	83.50
1947-49 dollars.....	72.41	72.34	71.00	72.32	72.56	73.60	73.43	70.84	70.96	71.46	71.07	71.78	73.23	71.81	67.61
Spendable average weekly earnings:															
Worker with no dependents:															
Current dollars.....	74.03	73.85	72.48	73.49	73.67	74.56	74.92	72.45	72.51	72.83	72.23	72.97	74.15	72.83	68.46
1947-49 dollars.....	58.82	58.47	57.43	58.46	58.05	59.46	59.70	57.68	57.78	58.17	57.88	58.42	59.56	58.45	55.43
Worker with 3 dependents:															
Current dollars.....	81.59	81.41	80.01	81.05	81.23	82.14	82.50	79.97	80.03	80.26	79.75	80.50	81.71	80.26	75.77
1947-49 dollars.....	64.50	64.46	63.40	64.48	64.67	65.50	65.74	63.67	63.77	64.19	63.90	64.45	65.63	64.49	61.44

<sup>1</sup> See footnote 1, table C-3.

Spendable average weekly earnings are obtained by deducting from gross average weekly earnings, Federal social security and income taxes for which the worker is liable. The amount of tax liability depends, of course, on the number of dependents supported by the worker as well as on the level of his gross income. Spendable earnings have been computed for 2 types of income receivers: (1) a worker with no dependents; (2) a worker with 3 dependents. The primary value of the spendable series is that of measuring relative changes in disposable earnings for 2 types of income receivers.

The computations of spendable earnings for both the worker with no dependents and the worker with 3 dependents are based upon the gross average

weekly earnings for all production workers in manufacturing without direct regard to marital status, family composition, or other sources of income.

Gross and spendable average weekly earnings expressed in 1947-49 dollars indicate changes in the level of average weekly earnings after adjustment for changes in purchasing power as measured by the Bureau's Consumer Price Index.

<sup>2</sup> Preliminary.

NOTE: For a description of these series, see The Calculation and Uses of the Spendable Earnings Series (in Monthly Labor Review, January 1959, pp. 80-84).

## D.—Consumer and Wholesale Prices

TABLE D-1. Consumer Price Index<sup>1</sup>—All-city average: All items, groups, subgroups, and special groups of items

[1947-40=100]															
Group	1960						1969						Annual average		
	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1960	1968
All items.....	126.6	126.5	126.3	126.2	125.7	125.6	125.4	125.5	125.6	125.5	125.2	124.8	124.9	124.6	123.5
Food <sup>1</sup> .....	120.6	120.3	119.7	119.5	117.7	117.4	117.6	117.8	117.9	118.4	118.7	118.3	119.4	118.3	120.3
Food at home.....	117.9	117.7	117.0	116.7	114.7	114.4	114.7	115.0	115.1	115.5	116.2	115.7	117.1	115.9	118.9
Cereals and bakery products.....	137.5	136.1	135.6	135.8	135.5	135.2	134.8	134.5	134.2	134.1	134.1	134.0	134.4	134.2	133.1
Meats, poultry, and fish.....	110.8	110.3	109.7	109.3	107.2	106.2	106.4	106.6	107.9	109.0	110.4	109.9	112.0	110.7	115.1
Dairy products.....	115.8	115.0	115.0	115.3	116.4	116.5	116.5	116.7	116.0	116.1	115.5	114.1	113.3	114.3	118.5
Fruits and vegetables.....	134.4	136.1	132.9	129.9	125.0	125.9	125.7	125.5	123.4	124.5	124.1	125.6	130.8	125.1	127.1
Other foods at home <sup>2</sup> .....	104.8	104.5	104.9	106.1	103.4	102.9	104.5	105.4	106.4	107.0	107.6	106.3	105.7	106.1	112.4
Housing <sup>3</sup> .....	131.3	131.3	131.2	131.4	131.3	131.2	130.7	130.4	130.4	130.1	129.7	129.3	129.0	129.2	127.7
Rent.....	141.8	141.6	141.4	141.4	141.2	141.0	140.9	140.8	140.5	140.4	140.0	139.8	139.6	139.7	137.7
Gas and electricity.....	124.5	124.7	124.7	124.4	124.1	124.0	123.2	122.7	121.7	121.7	121.6	120.1	119.5	119.9	117.0
Solid fuels and fuel oil.....	132.9	132.3	132.9	136.3	137.2	139.0	139.0	137.3	135.9	135.5	135.0	133.9	134.0	136.6	134.9
Housefurnishings.....	104.1	104.3	104.3	104.7	104.7	104.3	104.0	104.2	104.4	104.1	104.0	103.6	104.0	103.9	103.9
Household operation.....	137.4	137.3	137.2	137.0	136.9	136.3	135.9	135.5	135.4	135.3	135.2	134.6	134.3	134.3	131.4
Apparel.....	209.1	108.9	108.9	108.9	108.8	108.4	107.9	109.2	109.4	109.4	109.0	108.0	107.5	107.9	107.6
Men's and boys'.....	110.2	109.8	109.7	109.5	108.9	108.7	108.5	109.1	109.1	108.9	108.2	108.8	108.3	108.4	108.6
Women's and girls'.....	90.4	90.1	90.4	90.6	90.6	90.3	90.0	90.3	100.9	101.3	100.5	98.8	98.8	99.5	96.1
Footwear.....	139.8	140.1	139.8	139.8	139.7	138.7	139.4	139.7	139.3	138.5	137.9	137.3	135.2	135.2	129.8
Other apparel <sup>4</sup> .....	98.1	98.1	98.2	92.9	93.0	92.8	92.2	93.1	93.3	92.9	92.9	92.5	92.3	92.3	92.0
Transportation.....	145.9	145.8	145.6	145.1	146.5	147.5	147.6	148.7	149.0	148.5	146.4	146.7	146.3	146.3	140.5
Private.....	134.2	134.1	133.9	134.4	134.9	136.0	136.3	137.5	137.9	137.4	135.3	135.5	135.2	135.2	129.7
Public.....	200.3	199.7	199.4	199.4	199.4	199.3	197.2	197.2	196.0	195.9	194.9	194.9	194.2	193.9	188.0
Medical care.....	155.4	156.1	155.9	155.5	155.0	154.7	153.5	153.2	153.0	152.5	152.2	151.4	151.0	150.8	144.6
Personal care.....	133.4	133.2	133.2	132.9	132.7	132.6	132.7	132.9	132.7	132.5	132.1	131.7	131.3	131.2	128.6
Reading and recreation.....	121.6	121.1	121.4	121.1	120.9	120.6	120.3	120.4	120.0	119.7	119.6	119.1	119.1	118.6	116.7
Other goods and services.....	132.2	132.0	131.9	131.9	131.7	131.8	131.5	131.7	131.6	131.6	131.5	131.1	130.8	129.7	127.2
Special groups:															
All items less food.....	129.9	129.7	129.7	129.8	129.7	129.7	129.4	129.5	129.5	129.2	128.7	128.2	127.9	127.9	125.5
All items less shelter.....	124.2	124.0	123.8	123.7	123.1	123.0	122.9	123.1	123.1	123.2	122.9	122.4	122.7	122.2	121.3
All commodities less food.....	115.4	115.3	115.3	115.6	115.7	116.0	115.9	116.4	116.5	116.3	115.7	115.3	115.1	115.1	113.4
All commodities less food and shelter.....	117.7	117.6	117.3	117.4	116.7	116.7	116.7	117.1	117.2	117.3	117.0	116.6	117.0	116.6	116.3
Nondurables <sup>5</sup> .....	120.0	119.8	119.4	119.4	118.3	118.0	118.1	118.5	118.6	118.8	118.5	118.3	118.7	118.1	113.6
Nondurables less food.....	119.9	119.6	119.4	119.7	119.6	119.4	119.2	119.9	119.8	119.8	119.3	118.6	119.1	118.3	116.9
Nondurables less food and apparel.....	129.2	128.7	128.4	129.0	128.9	128.8	128.9	129.1	128.9	128.8	128.2	127.8	127.3	127.3	125.6
Durables <sup>6</sup> .....	111.1	111.5	111.9	112.1	112.5	113.3	113.3	113.8	114.1	113.6	112.8	112.8	113.1	113.0	116.9
Durables less cars.....	103.0	103.2	103.5	103.6	103.6	103.4	103.4	103.3	103.4	103.3	103.1	103.0	103.5	103.3	103.4
All services <sup>7</sup> .....	150.0	149.7	149.6	149.4	149.2	148.9	148.2	147.8	147.6	147.3	146.9	146.3	145.8	145.8	142.4
All services less rent.....	152.1	151.8	151.7	151.5	151.3	150.9	150.1	149.7	149.5	149.1	148.7	148.1	147.5	147.5	143.8
Household operation services, gas, and electricity.....	139.1	138.9	138.8	138.5	138.3	137.8	137.2	136.7	136.3	136.3	136.2	135.1	134.6	134.8	131.4
Transportation services.....	184.9	184.5	184.3	184.2	183.9	183.6	182.7	182.7	182.2	182.1	181.7	181.3	180.9	180.3	174.1
Medical care services.....	163.0	162.5	162.4	161.9	161.3	160.8	159.5	159.2	158.8	158.4	157.9	157.0	156.5	156.3	149.2
Other services.....	135.5	135.1	135.2	135.0	134.9	134.7	134.1	133.6	133.7	133.1	132.6	132.2	131.6	131.7	129.6

<sup>1</sup> The Consumer Price Index measures the average change in prices of goods and services purchased by urban wage-earner and clerical-worker families. Data for 46 large, medium-size, and small cities are combined for the all-city average.

<sup>2</sup> In addition to subgroups shown here, total food includes restaurant meals and other food bought and eaten away from home.

<sup>3</sup> Includes eggs, fats and oils, sugar and sweets, beverages (nonalcoholic), and other miscellaneous foods.

<sup>4</sup> In addition to subgroups shown here, total housing includes the purchase price of homes and other homeowner costs.

<sup>5</sup> Includes yard goods, diapers, and miscellaneous items.

<sup>6</sup> Revised.

<sup>7</sup> Includes food, house paint, solid fuels, fuel oil, textile housefurnishings, household paper, electric light bulbs, laundry soap and detergents, apparel

(except shoe repairs), gasoline, motor oil, prescriptions and drugs, toilet goods, nondurable toys, newspapers, cigarettes, cigars, beer, and whiskey.

<sup>8</sup> Includes water heaters, central heating furnaces, kitchen sinks, sink faucets, porch flooring, household appliances, furniture and bedding, floor coverings, dinnerware, automobiles, tires, radio and television sets, durable toys, and sporting goods.

<sup>9</sup> Includes rent, home purchase, real estate taxes, mortgage interest, property insurance, repainting garage, repainting roof, refinishing floors, gas, electricity, dry cleaning, laundry service, domestic service, telephone, water, postage, shoe repairs, auto repairs, auto insurance, auto registration, transit fares, railroad fares, professional medical services, hospital services, hospitalization and surgical insurance, barber and beauty shop services, television repairs, and motion picture admissions.

TABLE D-2. Consumer Price Index <sup>1</sup>—All items and food indexes, by city

[1947-49=100]

City	1960							1959							Annual average	
	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958	
All Items																
All-city average <sup>1</sup>	126.6	126.5	126.3	126.2	125.7	125.6	125.4	125.5	125.6	125.5	125.2	124.8	124.9	124.6	123.5	
Atlanta, Ga.	(9)	127.1	(9)	(9)	126.7	(9)	(9)	126.4	(9)	(9)	126.0	(9)	(9)	125.4	124.5	
Baltimore, Md.	(9)	128.3	(9)	(9)	127.7	(9)	(9)	127.2	(9)	(9)	127.5	(9)	(9)	126.8	124.5	
Boston, Mass.	128.7	(9)	(9)	128.3	(9)	(9)	126.4	(9)	(9)	126.7	(9)	(9)	125.6	125.8	124.8	
Chicago, Ill.	130.4	130.1	129.6	129.5	129.2	129.1	128.9	129.0	129.1	129.3	129.2	128.3	128.3	128.1	127.0	
Cincinnati, Ohio	(9)	124.6	(9)	(9)	123.6	(9)	(9)	123.8	(9)	(9)	123.6	(9)	(9)	123.1	122.3	
Cleveland, Ohio	(9)	(9)	127.1	(9)	(9)	126.1	(9)	(9)	126.4	(9)	(9)	125.8	(9)	125.6	124.5	
Detroit, Mich.	125.8	125.1	124.3	124.2	123.9	123.9	123.4	124.0	124.1	124.9	124.8	123.7	124.4	123.8	123.9	
Houston, Tex.	(9)	(9)	125.1	(9)	(9)	125.6	(9)	(9)	125.4	(9)	(9)	124.8	(9)	124.6	123.6	
Kansas City, Mo.	127.9	(9)	(9)	126.6	(9)	(9)	127.0	(9)	(9)	126.9	(9)	(9)	126.0	125.9	124.1	
Los Angeles, Calif.	129.5	129.7	129.8	130.1	129.3	128.8	129.1	128.9	128.8	128.5	127.8	127.5	127.6	127.4	125.4	
Minneapolis, Minn.	127.5	(9)	(9)	127.1	(9)	(9)	126.2	(9)	(9)	126.8	(9)	(9)	125.4	125.6	124.3	
New York, N.Y.	124.8	124.9	124.9	124.7	124.5	124.4	124.1	124.2	124.1	123.7	123.5	123.0	123.5	122.8	121.1	
Philadelphia, Pa.	126.9	126.4	126.4	125.4	126.0	125.5	125.5	126.5	126.3	126.0	125.8	124.4	124.2	124.5	123.1	
Pittsburgh, Pa.	128.9	(9)	(9)	127.9	(9)	(9)	126.6	(9)	(9)	126.8	(9)	(9)	125.7	125.5	124.6	
Portland, Oreg.	127.5	(9)	(9)	127.5	(9)	(9)	127.2	(9)	(9)	126.3	(9)	(9)	126.1	125.7	124.4	
St. Louis, Mo.	(9)	127.2	(9)	(9)	126.3	(9)	(9)	126.6	(9)	(9)	126.4	(9)	(9)	126.3	124.7	
San Francisco, Calif.	(9)	132.4	(9)	(9)	131.6	(9)	(9)	131.8	(9)	(9)	130.8	(9)	(9)	130.0	127.5	
Scranton, Pa.	(9)	(9)	122.1	(9)	(9)	121.4	(9)	(9)	121.5	(9)	(9)	121.2	(9)	120.8	120.2	
Seattle, Wash.	(9)	(9)	129.7	(9)	(9)	129.0	(9)	129.3	(9)	(9)	128.9	(9)	(9)	128.2	125.8	
Washington, D.C.	(9)	(9)	123.1	(9)	(9)	121.9	(9)	(9)	121.7	(9)	(9)	122.0	(9)	121.7	121.1	
Food																
All-city average <sup>1</sup>	120.6	120.3	119.7	119.5	117.7	117.4	117.6	117.8	117.9	118.4	118.7	118.3	119.4	118.3	120.3	
Atlanta, Ga.	117.4	117.6	116.8	116.8	115.0	114.1	114.5	114.2	114.3	115.3	116.5	116.4	117.0	115.7	118.0	
Baltimore, Md.	121.2	121.2	120.5	119.7	118.2	116.7	116.2	117.4	117.8	118.1	118.8	118.3	119.4	118.0	120.9	
Boston, Mass.	120.4	119.0	118.6	119.2	118.3	117.7	117.4	118.3	119.4	119.6	119.8	119.0	118.9	118.7	119.7	
Chicago, Ill.	119.3	118.8	117.2	116.7	115.1	114.4	115.2	114.6	115.3	116.2	116.8	116.1	117.1	115.8	117.3	
Cincinnati, Ohio	121.9	121.5	120.4	120.4	117.8	117.8	117.7	118.2	118.4	119.0	119.2	118.2	119.9	118.8	122.1	
Cleveland, Ohio	117.0	117.1	116.4	115.8	113.4	112.9	113.1	113.4	113.1	113.5	114.2	113.8	114.6	114.1	117.2	
Detroit, Mich.	120.6	120.0	119.0	119.1	116.5	115.7	115.8	116.3	116.9	118.1	118.1	116.8	118.0	117.5	121.1	
Houston, Tex.	115.6	114.8	114.4	114.8	113.0	113.3	113.6	113.5	113.9	114.1	114.1	114.4	114.9	114.7	117.0	
Kansas City, Mo.	113.9	114.0	112.7	112.4	110.7	110.4	111.3	111.4	111.3	111.9	112.6	112.4	112.9	112.2	114.4	
Los Angeles, Calif.	126.6	126.4	126.1	126.8	124.4	123.7	125.2	123.6	123.6	124.0	123.7	122.7	123.3	123.5	123.3	
Minneapolis, Minn.	118.9	119.3	118.1	118.6	116.6	116.5	117.0	117.3	117.9	117.8	118.0	117.5	119.2	118.0	118.6	
New York, N.Y.	121.9	121.8	121.8	121.4	120.7	120.8	120.5	120.8	120.7	120.4	120.9	120.0	122.4	120.3	120.9	
Philadelphia, Pa.	123.1	122.6	121.7	121.2	120.0	119.1	119.5	120.1	120.6	121.4	122.0	120.9	121.9	120.9	123.1	
Pittsburgh, Pa.	123.1	122.1	122.2	121.0	118.4	118.6	118.7	119.1	119.6	120.1	120.7	119.5	120.5	119.8	121.8	
Portland, Oreg.	121.7	121.3	120.4	121.2	120.0	120.2	121.2	121.0	120.7	121.1	121.2	121.2	121.6	120.7	120.7	
St. Louis, Mo.	119.9	119.6	118.5	118.0	116.7	117.5	116.2	117.6	117.7	118.3	118.7	117.8	119.1	118.7	121.2	
San Francisco, Calif.	124.7	124.2	124.3	124.6	122.7	122.2	123.6	123.1	122.3	122.9	122.8	122.0	122.2	122.6	123.1	
Scranton, Pa.	115.7	116.5	115.8	115.5	113.9	118.0	118.5	118.9	114.3	115.3	116.4	115.1	117.3	115.4	118.4	
Seattle, Wash.	123.0	122.6	122.6	122.8	120.9	121.0	121.4	121.1	120.8	121.1	120.8	120.8	121.4	120.8	121.3	
Washington, D.C.	120.9	120.9	120.4	119.5	117.9	117.2	117.3	118.1	118.0	118.5	119.5	118.9	120.5	119.0	121.6	

<sup>1</sup> See footnote 1, table D-1. Indexes measure time-to-time changes in prices of goods and services purchased by urban wage-earner and clerical-worker families. They do not indicate whether it costs more to live in one city than in another.

<sup>2</sup> Average of 45 cities.

<sup>3</sup> All items indexes are computed monthly for 5 cities and once every 3 months on a rotating cycle for 15 other cities.

<sup>4</sup> Revised.



TABLE D-3. Indexes of wholesale prices,<sup>1</sup> by group and subgroup of commodities

[1947-49=100, unless otherwise specified]

Commodity group	1950							1951							Annual average	
	July <sup>1</sup>	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1950	1951	
All commodities	119.7	119.5	119.7	120.0	120.0	119.3	119.3	118.9	118.9	119.1	119.7	119.1	119.5	119.5	119.2	
Farm products and processed foods	99.1	98.6	99.1	99.2	99.1	96.6	96.3	95.5	95.4	96.7	98.6	96.7	98.2	98.2	103.1	
Farm products	88.9	89.0	90.4	91.1	90.4	87.0	86.5	85.9	85.4	86.5	88.9	87.1	88.4	89.1	94.9	
Fresh and dried fruits and vegetables	112.9	109.7	116.9	111.5	104.4	100.5	104.9	107.9	103.2	102.2	103.1	92.8	98.5	102.7	112.0	
Grains	75.5	77.5	77.8	79.7	78.2	76.7	77.2	76.1	76.5	76.7	78.2	77.8	78.5	77.8	79.5	
Livestock and live poultry	84.1	85.1	85.8	85.7	86.2	80.8	78.5	76.0	75.3	75.8	82.1	83.1	84.8	85.1	92.9	
Plant and animal fibers	96.4	96.7	96.6	96.3	96.0	96.1	95.9	95.7	94.7	94.7	95.6	95.7	100.0	98.2	101.9	
Fluid milk	95.5	93.3	92.5	95.7	97.9	99.0	99.3	98.3	98.2	97.3	96.0	94.4	92.2	94.4	94.6	
Eggs	65.4	64.2	69.6	80.2	75.8	58.4	56.9	62.8	63.4	60.0	55.4	66.8	65.4	65.6	81.7	
Hay, hayseeds, and oilseeds	73.5	74.4	70.5	76.3	76.7	77.1	77.5	76.3	76.3	75.4	73.0	73.1	74.9	76.6	76.9	
Other farm products	127.7	128.0	128.3	128.6	127.9	128.9	127.4	127.5	131.7	131.5	133.4	132.1	132.3	132.6	140.4	
Processed foods	108.8	107.6	107.3	106.8	107.3	105.7	105.6	104.7	104.9	106.4	107.8	105.8	107.5	107.0	110.9	
Cereal and bakery products	122.6	121.2	121.2	120.9	120.8	120.6	120.7	120.4	120.4	120.4	119.5	119.5	119.3	117.9	117.9	
Meats, poultry, and fish	99.5	98.1	98.5	96.7	97.8	93.1	92.4	90.5	90.5	95.1	99.7	94.8	99.3	98.2	105.7	
Dairy products and ice cream	117.3	116.0	114.9	115.6	117.7	118.4	118.8	118.1	117.7	116.7	116.2	114.7	113.9	114.3	112.7	
Canned and frozen fruits and vegetables	107.4	106.9	106.3	105.8	105.8	105.0	104.5	104.6	106.4	107.4	106.9	107.9	110.6	109.0	108.7	
Sugar and confectionery	116.9	114.0	114.0	114.1	113.7	113.9	113.3	115.6	116.7	117.4	116.4	115.5	115.3	115.1	115.6	
Packaged beverage materials	143.5	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.5	165.7	
Animal fats and oils	62.0	56.9	56.0	57.6	53.1	49.4	48.7	50.1	54.2	53.2	53.5	50.9	52.7	54.6	72.0	
Crude vegetable oils	50.2	50.3	48.7	47.5	45.2	45.3	46.0	45.0	45.8	48.7	52.0	55.6	57.3	53.1	60.1	
Refined vegetable oils	55.5	56.3	57.0	56.7	55.6	54.5	54.8	52.5	52.6	54.0	55.5	57.8	61.9	58.0	67.9	
Vegetable oil end products	72.7	72.7	71.5	71.5	71.5	71.2	71.2	71.1	71.9	73.6	74.2	74.1	74.9	74.0	82.8	
Other processed foods	103.3	103.9	102.2	102.8	101.7	101.6	103.9	100.0	98.3	98.6	96.0	96.1	96.7	96.6	96.6	
All commodities except farm products	124.8	124.6	124.5	124.9	124.9	124.7	124.8	124.4	124.4	124.8	124.8	124.5	124.7	124.5	123.3	
All commodities except farm and foods	128.2	128.2	128.2	128.7	128.6	128.7	128.8	128.6	128.5	128.4	128.4	128.4	128.4	128.2	128.0	
Textile products and apparel	96.3	96.3	96.3	96.3	96.3	96.3	96.6	96.7	96.3	95.9	95.9	95.7	95.3	95.0	93.5	
Cotton products	94.7	94.8	94.8	95.0	95.6	95.8	95.9	95.0	94.0	93.0	92.6	92.1	91.9	91.7	88.4	
Wool products	102.1	102.1	102.4	102.7	102.8	103.2	104.0	104.2	103.7	104.1	104.7	104.3	103.3	101.6	100.8	
Manmade fiber textile products	79.6	79.6	79.7	79.4	79.4	79.8	79.4	81.3	81.4	81.0	82.1	82.3	82.2	81.1	80.2	
Silk products	123.3	121.6	118.7	118.0	116.6	119.5	122.0	121.7	117.4	114.2	113.2	113.7	113.4	113.5	113.5	
Apparel	101.0	100.8	100.6	100.7	100.7	100.6	100.8	100.9	100.6	100.6	100.6	100.4	99.9	100.0	99.3	
Other textile products	81.9	85.1	86.8	82.5	80.5	79.8	79.3	79.4	78.4	78.5	77.3	75.2	75.5	75.8	75.2	
Hides, skins, leather, and leather products	110.2	110.3	111.2	112.1	111.8	112.0	112.7	112.3	111.7	111.8	111.9	111.9	111.9	111.3	100.6	
Hides and skins	68.0	67.1	72.9	73.5	72.0	69.8	73.7	73.8	67.2	87.5	102.4	106.9	107.7	90.7	87.5	
Leather	102.2	103.0	103.5	104.7	102.8	104.8	105.5	103.5	103.8	112.2	117.1	117.3	118.7	111.8	92.3	
Footwear	132.5	132.5	132.5	133.5	134.2	134.2	134.2	134.1	133.5	133.5	132.3	132.3	130.6	129.5	122.1	
Other leather products	106.0	106.4	106.7	107.3	107.3	107.2	108.0	107.9	109.3	111.3	113.9	114.0	113.9	109.0	97.5	
Fuel, power, and lighting materials	113.7	112.3	110.8	112.2	112.3	112.0	111.9	111.7	111.2	111.4	111.9	112.2	111.1	112.7	112.7	
Coal	120.3	119.5	118.7	119.0	120.4	121.1	124.1	124.1	124.0	123.6	123.0	122.0	121.1	122.6	122.9	
Coke	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	169.8	161.9	
Gas fuels	113.7	112.2	111.6	115.6	115.6	114.5	116.6	115.5	113.8	111.1	112.8	109.2	105.8	110.9	101.7	
Electric power	102.0	101.8	101.7	101.8	101.8	101.8	101.3	101.2	100.7	100.7	100.6	100.6	100.8	100.8	100.4	
Petroleum and products	117.9	116.0	113.6	115.4	115.0	114.6	114.4	114.3	113.9	114.5	115.1	116.2	114.8	116.6	117.7	
Chemicals and allied products	110.4	110.2	110.2	110.2	110.1	110.0	109.9	110.0	110.0	110.0	109.9	109.7	109.9	109.9	110.4	
Industrial chemicals	124.7	124.6	124.6	124.5	124.2	124.2	124.1	124.0	123.9	123.9	123.8	123.7	123.9	123.8	123.5	
Prepared paint	128.4	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	128.3	
Paint materials	103.8	103.2	103.0	102.9	102.8	103.0	103.0	103.0	102.9	102.6	102.1	101.5	101.3	101.9	103.6	
Drugs and pharmaceuticals	95.1	95.1	94.8	94.5	94.2	94.0	93.8	93.7	93.8	93.8	93.7	93.6	93.7	93.4	94.0	
Fats and oils, inedible	47.7	47.9	50.2	51.7	50.6	49.4	49.2	50.8	52.2	54.5	55.0	53.8	55.3	56.7	62.6	
Mixed fertilizer	110.3	110.2	110.2	110.2	110.1	110.1	109.6	109.6	109.6	109.4	109.4	109.2	108.8	109.5	110.7	
Fertilizer materials	110.6	108.8	108.8	108.8	108.8	108.8	108.8	107.0	106.6	106.6	106.3	105.2	104.8	107.4	108.0	
Other chemicals and allied products	106.4	106.4	106.4	106.4	106.5	106.5	106.5	106.8	106.8	106.8	106.5	106.5	106.5	106.6	106.8	
Rubber and rubber products	146.1	147.2	146.7	145.1	145.2	145.1	143.5	142.5	144.3	142.3	142.0	141.0	146.4	144.7	145.0	
Crude rubber	161.5	160.6	160.6	160.9	161.1	160.7	162.8	160.5	173.6	159.6	157.9	153.8	148.8	149.3	134.0	
Tires and tubes	139.2	138.1	138.1	138.1	138.1	138.1	133.3	133.3	133.3	133.3	134.3	134.3	150.0	140.4	152.4	
Other rubber products	145.6	145.6	144.5	144.5	144.6	144.6	144.6	143.0	143.0	142.0	142.2	141.4	141.6	142.2	142.7	
Lumber and wood products	121.4	122.4	123.7	124.3	124.5	124.9	125.1	124.8	124.3	123.2	127.2	126.5	128.3	125.8	117.7	
Lumber	121.6	123.1	124.9	125.7	125.9	126.1	126.1	125.9	125.5	127.9	129.3	130.3	129.9	127.1	118.0	
Millwork	137.0	136.9	136.9	136.8	137.7	137.7	137.8	137.9	138.1	138.7	138.7	138.6	137.7	135.9	128.2	
Plywood	95.5	95.5	95.7	96.1	95.9	97.0	98.2	97.2	94.5	96.5	96.6	100.9	102.4	101.2	97.1	
Pulp, paper, and allied products	133.5	133.5	133.4	133.1	133.1	133.2	133.7	132.4	132.3	132.3	132.3	132.3	132.3	132.2	131.0	
Woodpulp	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	121.2	
Waste paper	82.3	82.3	83.2	88.4	89.3	93.6	108.0	109.6	109.8	115.0	115.0	115.0	115.9	112.5	88.3	
Paper	145.9	145.9	145.9	145.1	144.8	144.5	144.5	144.3	144.3	144.3	143.8	143.7	143.6	143.4	142.3	
Paperboard	135.9	135.9	135.9	135.9	135.9	135.9	135.9	135.9	135.9	135.9	135.9	135.9	135.9	136.1	136.3	
Converted paper and paperboard products	130.9	130.9	130.6	130.0	130.0	130.0	130.0	127.5	127.4	127.4	127.3	127.4	127.6	127.5	127.6	
Building paper and board	144.2	145.1	145.1	145.1	146.5	147.6	147.6	147.6	147.6	147.6	147.6	147.6	147.3	146.4	142.3	
Metals and metal products	153.4	153.8	154.2	154.5	154.5	155.3	155.3	155.2	155.8	154.5	153.8	152.8	152.7	153.6	150.4	
Iron and steel	169.5	169.9	170.4	170.5	170.5	171.6	172.4	172.2	173.6	173.1	172.4	171.9	171.8	17		

TABLE D-3. Indexes of wholesale prices,<sup>1</sup> by group and subgroup of commodities—Continued

[1947-49=100, unless otherwise specified]

Commodity group	1960							1959							Annual average	
	July <sup>1</sup>	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958	
Machinery and motive products.....	153.4	153.4	153.5	154.0	153.9	153.9	153.8	153.7	153.6	153.7	153.9	153.8	153.6	153.0	149.8	
Agricultural machinery and equipment.....	145.7	<sup>3</sup> 145.7	145.7	145.6	145.3	145.3	144.3	144.0	143.9	143.4	143.5	143.4	143.4	143.4	139.1	
Construction machinery and equipment.....	175.5	175.3	175.3	174.7	174.3	173.9	173.6	172.9	172.9	172.5	172.4	172.0	171.8	171.9	166.1	
Metalworking machinery and equipment.....	180.0	<sup>3</sup> 180.0	<sup>3</sup> 179.2	<sup>3</sup> 178.5	<sup>3</sup> 178.6	<sup>3</sup> 177.8	177.7	177.6	177.5	177.4	176.6	176.0	174.0	174.5	170.1	
General purpose machinery and equipment.....	166.5	<sup>3</sup> 166.4	167.8	167.9	167.7	168.2	167.8	167.9	167.5	167.0	166.8	166.5	165.9	165.3	160.0	
Miscellaneous machinery.....	150.0	<sup>3</sup> 150.2	150.0	150.1	149.9	149.6	149.7	149.8	149.7	149.7	149.5	149.6	149.5	149.4	148.1	
Electrical machinery and equipment.....	153.9	<sup>3</sup> 153.9	153.9	155.6	155.6	155.7	155.8	155.4	155.9	155.9	155.8	155.5	155.8	154.4	152.2	
Motor vehicles.....	141.6	141.6	141.6	141.6	141.6	141.6	141.6	141.6	141.6	141.9	143.2	143.2	143.2	142.8	139.7	
Furniture and other household durables.....	123.0	<sup>3</sup> 123.0	123.2	123.5	123.7	123.5	123.4	123.2	123.3	123.3	123.4	123.5	123.8	123.4	123.2	
Household furniture.....	124.9	<sup>3</sup> 124.9	125.0	124.9	124.9	124.9	124.7	124.2	124.3	124.4	124.1	124.2	124.2	124.1	123.0	
Commercial furniture.....	157.1	156.7	156.7	156.7	156.6	155.8	155.8	155.5	155.5	155.5	155.5	155.3	155.3	155.2	154.6	
Floor coverings.....	130.6	130.6	130.8	130.8	130.6	129.6	129.6	129.0	129.3	129.3	128.9	128.6	128.6	128.1	127.8	
Household appliances.....	101.7	<sup>3</sup> 101.7	102.1	103.1	103.2	103.3	103.3	103.7	104.1	103.9	104.3	104.4	104.4	104.7	104.7	
Television, radio receivers, and phonographs.....	91.4	<sup>3</sup> 91.4	91.7	91.7	91.8	91.8	91.7	91.9	91.8	92.1	92.7	93.3	94.3	92.8	94.4	
Other household durable goods.....	157.4	<sup>3</sup> 157.4	157.4	157.3	158.3	158.1	157.8	156.6	156.6	156.6	156.6	156.4	156.8	156.4	155.1	
Nonmetallic minerals—structural.....	137.8	<sup>3</sup> 137.8	<sup>3</sup> 137.9	138.3	138.2	138.2	138.4	137.8	137.7	137.5	137.5	137.4	137.5	137.7	136.0	
Flat glass.....	130.2	<sup>3</sup> 130.2	<sup>3</sup> 130.2	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.4	
Concrete ingredients.....	142.1	142.1	142.1	142.1	142.1	142.0	142.0	140.4	140.4	140.4	140.4	140.4	140.4	140.3	139.0	
Concrete products.....	131.3	131.3	131.5	131.3	131.0	131.1	130.5	130.4	130.3	130.3	130.2	129.7	129.9	129.7	128.1	
Structural clay products.....	161.8	161.7	161.7	161.5	161.5	161.5	161.3	160.7	160.6	160.4	160.5	160.5	160.6	160.2	156.5	
Gypsum products.....	133.2	133.2	133.2	133.2	133.2	133.1	133.1	133.1	133.1	133.1	133.1	133.1	133.1	133.1	132.1	
Prepared asphalt roofing.....	106.6	106.6	106.6	106.6	107.6	107.6	113.6	113.6	113.6	110.8	110.8	111.9	111.9	116.4	112.8	
Other nonmetallic minerals.....	134.6	134.6	134.6	134.4	133.7	133.7	132.8	132.5	132.5	132.5	132.5	132.5	132.5	132.4	131.2	
Tobacco products and bottled beverages <sup>4</sup> .....	131.2	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.8	131.9	132.2	131.4	128.2	
Tobacco products <sup>4</sup> .....	130.8	130.8	130.8	130.8	130.8	130.8	130.8	130.7	130.7	130.7	130.7	130.7	130.7	130.5	129.6	
Alcoholic beverages.....	120.6	120.6	120.6	120.6	120.6	120.6	120.5	120.7	120.7	120.7	120.9	121.0	121.8	121.3	120.5	
Nonalcoholic beverages.....	167.4	171.1	171.1	171.1	171.1	171.1	171.1	171.1	171.1	171.1	171.1	171.1	171.1	167.4	149.3	
Miscellaneous products.....	90.8	90.9	91.1	95.4	94.0	93.4	93.3	94.2	93.7	91.8	88.6	92.0	92.9	94.5	94.2	
Toys, sporting goods, small arms, and ammunition.....	118.6	118.3	118.3	118.3	117.8	117.8	117.7	118.0	117.7	117.7	117.7	117.7	117.5	117.5	119.0	
Manufactured animal feeds.....	67.3	67.6	68.0	75.6	73.2	72.2	75.6	74.0	73.7	70.3	64.5	70.6	72.2	75.1	74.4	
Notions and accessories.....	97.3	96.4	96.4	97.2	97.5	97.5	97.5	97.5	97.5	97.5	96.3	96.3	97.5	97.3	97.5	
Jewelry, watches, and photographic equipment.....	110.7	110.2	110.5	110.5	110.6	110.6	110.6	109.5	108.3	108.3	108.3	108.3	108.1	108.3	107.6	
Other miscellaneous products.....	132.5	132.6	132.5	132.1	131.6	131.5	131.9	131.9	131.9	132.0	132.0	132.0	131.9	132.2	132.2	

<sup>1</sup> As of January 1958, new weights reflecting 1954 values were introduced into the index. Technical details furnished upon request to the Bureau.<sup>2</sup> Preliminary.<sup>3</sup> Revised.<sup>4</sup> January 1958=100.<sup>5</sup> This index was formerly tobacco manufactures and bottled beverages.<sup>6</sup> New series.

TABLE D-4. Indexes of wholesale prices,<sup>1</sup> by stage of processing and durability of product

[1947-49=100]

Commodity group	1950												1950		Annual average	
	July <sup>a</sup>	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1950	1948	
All commodities.....	119.7	119.5	119.7	120.0	120.0	119.3	119.3	118.9	118.9	119.1	119.7	119.1	119.5	119.5	119.2	
Stage of processing																
Crude materials for further processing.....	94.8	95.3	96.0	96.3	96.4	94.8	94.6	93.4	93.6	94.4	95.9	95.6	96.4	96.7	96.4	
Crude foodstuffs and feedstuffs.....	86.1	86.8	87.5	88.0	88.0	84.7	83.7	82.1	81.8	83.2	85.3	85.2	86.3	86.8	82.9	
Crude nonfood materials except fuel.....	107.7	108.2	108.9	108.8	108.8	110.5	111.7	111.4	112.6	112.3	112.7	112.1	112.6	112.2	108.4	
Crude nonfood materials, except fuel, for manufacturing.....	105.8	106.3	107.1	107.0	106.9	108.8	110.1	109.9	111.4	110.9	111.3	110.6	111.2	110.6	109.8	
Crude nonfood materials, except fuel, for construction.....	142.1	142.1	142.1	142.1	142.1	142.0	142.0	140.4	140.4	140.4	140.4	140.4	140.3	140.3	139.0	
Crude fuel.....	122.5	121.5	120.7	122.0	125.7	125.5	126.0	125.7	125.2	124.2	124.2	122.5	119.7	123.4	121.2	
Crude fuel for manufacturing.....	122.0	121.1	120.3	121.5	125.2	124.9	125.5	125.2	124.7	123.7	123.7	122.1	119.3	122.9	120.9	
Crude fuel for nonmanufacturing.....	123.2	122.2	121.4	122.8	128.5	126.3	126.9	126.6	126.0	124.9	124.9	123.2	120.5	124.1	121.8	
Intermediate materials, supplies, and components.....	127.0	127.0	127.1	127.6	127.5	127.4	127.5	127.3	127.3	127.1	126.9	127.0	127.2	127.0	125.8	
Intermediate materials and components for manufacturing.....	129.1	129.1	129.2	129.5	129.4	129.5	129.5	129.4	129.5	129.4	129.4	129.1	129.4	129.0	127.2	
Intermediate materials for food manufacturing.....	100.0	99.0	98.6	98.3	97.9	97.2	97.4	97.0	97.5	98.5	99.1	98.6	99.3	98.5	102.2	
Intermediate materials for nondurable manufacturing.....	106.9	106.8	106.8	106.9	106.8	106.9	106.9	107.0	106.8	106.9	107.2	107.0	107.0	106.4	104.7	
Intermediate materials for durable manufacturing.....	158.1	158.4	158.8	159.0	158.9	159.0	159.0	158.6	159.0	158.5	158.2	157.6	157.8	157.9	154.8	
Components for manufacturing.....	149.9	150.3	150.8	152.0	152.0	152.4	152.4	152.4	151.6	151.3	151.1	151.9	151.5	151.5	149.8	
Materials and components for construction.....	135.3	135.8	136.4	136.7	136.9	137.1	137.2	136.9	136.7	136.9	137.0	137.1	137.0	136.5	132.9	
Processed fuels and lubricants.....	109.6	108.3	106.3	107.3	106.8	106.1	105.4	105.3	105.0	105.3	106.0	106.3	105.1	106.0	104.6	
Processed fuels and lubricants for manufacturing.....	109.4	108.3	106.7	107.4	106.9	106.4	105.9	105.6	105.0	105.1	105.6	105.7	104.6	105.6	105.8	
Processed fuels and lubricants for nonmanufacturing.....	106.9	108.4	105.6	107.4	106.6	105.5	104.7	104.7	105.1	105.6	106.7	107.4	105.9	106.8	107.7	
Containers, nonreturnable.....	138.4	138.9	139.1	138.2	138.4	138.3	137.9	136.3	136.2	136.2	136.2	136.2	136.2	136.7	137.4	
Supplies.....	115.2	115.4	115.4	117.3	116.6	116.3	117.1	117.2	117.1	115.9	114.1	115.7	116.4	116.6	115.1	
Supplies for manufacturing.....	149.7	149.8	149.5	148.8	148.8	148.4	148.3	145.5	145.7	145.8	145.8	145.0	144.8	143.5	139.9	
Supplies for nonmanufacturing.....	100.0	100.2	100.4	103.2	102.3	101.9	103.0	104.1	103.9	102.4	100.0	102.4	103.4	104.1	103.4	
Manufactured animal feeds.....	61.2	61.6	62.0	60.8	67.5	66.7	70.2	75.1	74.4	70.6	64.0	70.6	71.6	74.7	73.0	
Other supplies.....	122.8	122.9	122.9	122.8	122.7	122.6	122.3	121.2	121.2	121.1	121.1	121.1	121.1	121.3	121.2	
Finished goods (goods to users, including raw foods and fuels).....	121.7	121.1	121.2	121.4	121.4	120.8	120.6	120.1	120.0	120.5	121.4	120.2	120.8	120.6	120.8	
Consumer finished goods.....	112.8	113.1	113.2	113.4	113.4	112.8	112.4	111.9	111.7	112.9	113.4	111.8	112.4	112.5	113.5	
Consumer foods.....	108.4	106.9	107.5	107.5	107.4	104.7	104.8	103.6	103.5	105.0	107.2	103.6	105.4	105.5	110.5	
Consumer crude foods.....	96.5	93.4	98.3	100.2	96.7	89.8	91.5	94.2	92.3	93.6	98.9	98.1	99.6	91.9	101.0	
Consumer processed foods.....	110.9	109.8	109.5	109.1	109.7	107.8	107.7	105.6	105.9	107.5	109.0	106.9	108.8	108.4	112.8	
Consumer other nondurable goods.....	114.0	113.6	113.2	113.7	113.8	113.8	113.9	113.8	113.6	113.5	113.5	113.4	113.1	113.4	111.7	
Consumer durable goods.....	126.3	126.2	126.3	126.5	126.5	126.4	126.4	126.2	126.1	126.2	126.6	126.7	126.7	126.5	125.0	
Producer finished goods.....	153.7	153.7	153.6	153.9	153.9	153.8	153.8	153.5	153.6	153.6	153.9	153.6	153.2	153.2	150.3	
Producer finished goods for manufacturing.....	160.0	159.9	159.6	160.1	160.1	159.8	159.6	158.9	158.6	158.5	158.7	158.4	158.2	158.1	155.0	
Producer finished goods for nonmanufacturing.....	148.3	148.3	148.5	148.6	148.5	148.7	148.8	149.0	149.3	149.4	149.8	149.7	149.6	149.1	146.4	
Durability of product																
Total durable goods.....	145.7	145.8	146.1	146.5	146.5	146.8	146.8	146.6	146.7	146.4	146.4	146.2	146.1	145.9	142.8	
Total nondurable goods.....	105.5	105.2	105.2	105.6	105.6	104.3	104.3	103.8	103.7	104.2	105.0	104.4	105.0	105.0	106.4	
Total manufactures.....	125.9	125.8	125.7	126.0	126.0	125.7	125.7	125.3	125.3	125.4	125.7	125.5	125.8	125.5	124.5	
Durable manufactures.....	147.0	147.2	147.4	147.8	147.5	147.9	147.8	147.6	147.6	147.4	147.5	147.3	147.3	147.0	144.0	
Nondurable manufactures.....	109.2	108.8	108.5	108.8	108.7	108.1	108.2	107.6	107.6	108.0	108.4	108.0	108.6	108.5	109.2	
Total raw or slightly processed goods.....	98.7	98.4	99.3	99.9	99.7	97.8	97.8	97.2	97.1	97.8	99.3	97.7	98.3	98.9	101.4	
Durable raw or slightly processed goods.....	106.0	105.8	107.1	108.2	108.2	114.9	117.5	116.6	120.5	117.4	115.6	113.0	111.6	114.1	108.3	
Nondurable raw or slightly processed goods.....	95.3	97.9	98.9	99.4	99.2	96.8	96.7	96.1	95.8	96.7	98.4	96.8	97.8	98.1	101.2	

<sup>1</sup> See footnote 1, table D-3.<sup>2</sup> Preliminary.<sup>3</sup> Revised.

NOTE: For description of the series by stage of processing, see New BLS Economic Sector Indexes of Wholesale Prices (in Monthly Labor Review, December 1955, pp. 1448-1453); and by durability of product and data beginning with 1947, see Wholesale Prices and Price Indexes, 1957 BLS Bull. 1235 (1958).

## E.—Work Stoppages

TABLE E-1. Work stoppages resulting from labor-management disputes <sup>1</sup>

Month and year	Number of stoppages		Workers involved in stoppages		Man-days idle during month or year	
	Beginning in month or year	In effect during month	Beginning in month or year	In effect during month	Number	Percent of estimated working time
1935-39 (average).....	2,862	.....	1,130,000	.....	16,900,000	0.27
1947-49 (average).....	3,573	.....	2,380,000	.....	39,700,000	.46
1945.....	4,750	.....	3,470,000	.....	38,000,000	.47
1946.....	4,985	.....	4,600,000	.....	116,000,000	1.43
1947.....	3,653	.....	2,170,000	.....	34,600,000	.41
1948.....	3,419	.....	1,900,000	.....	34,100,000	.37
1949.....	3,606	.....	3,030,000	.....	50,500,000	.59
1950.....	4,843	.....	2,410,000	.....	38,800,000	.44
1951.....	4,757	.....	2,230,000	.....	22,900,000	.23
1952.....	5,117	.....	3,540,000	.....	59,100,000	.57
1953.....	5,091	.....	2,400,000	.....	28,300,000	.26
1954.....	3,468	.....	1,530,000	.....	22,600,000	.21
1955.....	4,320	.....	2,650,000	.....	26,200,000	.26
1956.....	3,825	.....	1,900,000	.....	33,100,000	.29
1957.....	3,673	.....	1,360,000	.....	16,500,000	.14
1958.....	3,494	.....	2,090,000	.....	23,900,000	.22
1959.....	3,708	.....	1,880,000	.....	69,000,000	.61
1959: July.....	420	681	668,000	787,000	9,230,000	.95
August.....	380	636	161,000	757,000	13,400,000	1.44
September.....	322	624	109,000	781,000	13,800,000	1.48
October.....	277	548	125,000	775,000	14,100,000	1.45
November.....	161	402	41,100	632,000	4,300,000	.48
December.....	112	285	23,100	101,000	1,430,000	.14
1960: January <sup>2</sup> .....	200	325	65,000	140,000	1,000,000	.11
February <sup>2</sup> .....	250	400	70,000	145,000	1,250,000	.14
March <sup>2</sup> .....	270	430	85,000	140,000	1,500,000	.15
April <sup>2</sup> .....	370	530	110,000	190,000	1,500,000	.16
May <sup>2</sup> .....	400	600	150,000	225,000	1,750,000	.19
June <sup>2</sup> .....	425	650	190,000	285,000	2,750,000	.28
July <sup>2</sup> .....	325	575	150,000	230,000	2,130,000	.24

<sup>1</sup> The data include all known work stoppages involving 6 or more workers and lasting a full day or shift or longer. Figures on workers involved and man-days idle cover all workers made idle for as long as 1 shift in establishments directly involved in a stoppage. They do not measure the indirect or

secondary effect on other establishments or industries whose employees are made idle as a result of material or service shortages.

<sup>2</sup> Preliminary.



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